City of Lowell

COMPREHENSIVE PLAN 2025

Prepared By:

DUNKIN, SEFKO & ASSOCIATES, INC.

Urban Planning Consultants

In Cooperation With:

THE COMPREHENSIVE PLAN STEERING COMMITTEE

&

CITY OF LOWELL STAFF

City of Lowell

COMPREHENSIVE PLAN 2025

Acknowledgements

The drafting and adoption of the City of Lowell's Comprehensive Plan 2025 would not have been possible without the involvement of many people, including the following:

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City of Lowell

COMPREHENSIVE PLAN 2025

Official Plan

Adopted on May 18, 2004
Resolution No. _____

Passed and approved this 18th day of May, 2004.

Approved: _____ *Attest:* _____
Phil Biggers, Mayor *Sandra Jarrett, City Clerk*

City of Lowell

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Preface: The Overall Planning Process

The Planning Process Defined

A city's comprehensive plan can be defined as a long-range planning tool that is intended to be used by City staff, decision-makers and citizens to guide the growth and physical development of a community for ten years, twenty years, or an even longer period of time. It is a vision of what the community can become, and is a long-range statement of public policy.

In basic terms, the primary objectives of a comprehensive plan are to:

- Ensure efficient delivery of public services,
- Coordinate public and private investment,
- Minimize conflict between land uses,
- Manage growth in an orderly manner,
- Increase the cost-effectiveness of public investments, and
- Provide a rational and reasonable basis for making decisions about the community.

The Purpose of the Planning Process

Specifically, this Comprehensive Plan is intended to establish a generalized pattern for development within Lowell, which should reinforce the established vision of the City's future physical form - how the community should grow, develop and mature over time. The development of various physical elements within the community, including transportation facilities, land uses, housing, recreation areas and facilities, and public facilities, will directly impact the future growth and desirability of Lowell. Policies and recommendations will be made herein relative to the distribution and interrelationships of future development within the City. These policies and recommendations are supported by a set of goals and objectives (Chapter 2) that were established by citizens, business leaders, and City leaders as the formative statements of Lowell's Comprehensive Plan, its "blueprint for the future".

The Legal Reasoning Behind the Planning Process

The State of Arkansas has established laws with regard to the way in which incorporated communities can ensure the health, safety and welfare of their citizens. State law gives communities the power to regulate the use of land, but only if such regulations are based on a plan. Specifically, the law states that:

> ***§14-56-402. Authority Generally.***
>
> *Cities of the first and second class and incorporated towns shall have the power to adopt and enforce plans for the coordinated, adjusted, and harmonious development of the municipality and its environs.*
>
> ***§14-56-403. Purpose of plans.***
>
> *(a) The plans of the municipality shall be prepared in order to promote, in accordance with present and future needs, the safety, morals, order, convenience, prosperity, and general welfare of the citizens.*
>
> *(b) The plans may provide, among other things:*
>
> *(1) Efficiency and economy in the process of development;*
>
> *(2) The appropriate and best use of land;*
>
> *(3) Convenience of traffic and circulation of people and goods;*
>
> *(4) Safety from fire and other damages;*
>
> *(5) Adequate light and air in the use and occupancy of buildings;*
>
> *(6) Healthful and convenient distribution of population;*
>
> *(7) Good civic design and arrangement;*
>
> *(8) Adequate public utilities and facilities; and*
>
> *(9) Wise and efficient expenditure of funds.*
>
> ***§14-56-415. Plan recommendations.***
>
> *Following the adoption and filing of any plan, the planning commission may transmit to the legislative body, for enactment, recommended ordinances and regulations which will carry out or protect the various elements of the plan.*
>
> Subchapter 4 (Municipal Planning) of Chapter 56 (Municipal Building and Zoning Regulations – Planning), Subtitle 3 (Municipal Government), Title 14 (Local Government) of the Arkansas Code.

Therefore, it can be stated that there are three interrelated purposes of a Comprehensive Plan: 1) it allows the citizens of a community to create a shared vision of what they want the community to become, 2) it establishes ways in which a community can effectively realize this vision, and 3) it establishes the legal foundation necessary to implement planning-related regulatory ordinances.

The Importance of Planning-Related Policy

By adopting the policies set forth in the Comprehensive Plan, Lowell can prepare for growth, and it can maximize the future benefits of that growth for its citizens. The Comprehensive Plan should be considered an important tool for managing community change in order to achieve the desired quality of life. Lowell is a growing community that is surrounded by other growing communities, and therefore development within the City is inevitable. However, proactive planning can ensure that future development occurs in a way that is positive for Lowell. Careful planning is particularly important to a growing and evolving community like Lowell, because it helps to ensure that as size and population characteristics change over time, the community continues to develop in a manner that reflects the objectives and values of the City as a whole. The product of the advance-planning program that the City of Lowell has undertaken is this Comprehensive Plan document (and associated maps), which is sometimes referred to as the community's "Master Plan".

It is important to recognize the difference between a Comprehensive Plan and the actual regulations that implement the Comprehensive Plan. The City staff and City Council should use the Plan as a *policy* guide; that is, the recommendations contained within the Plan should be followed when making decisions about the City's growth and development. The Comprehensive Plan is not the *legal* guide, however. There are two primary legal guides that serve to implement the Comprehensive Plan (the policy guide) – the Zoning Ordinance and the Subdivision Ordinance. These implementation tools will be based on the policies set forth in the Comprehensive Plan, just as Arkansas state law mandates.

The Comprehensive Plan, once adopted, becomes the official development policy of the City. However, this document should not be considered to be the end of the comprehensive planning process. Planning is not a single event – it is a continuous and ever-changing process. The key to successful, on-going planning is to continually utilize the Comprehensive Plan, and to continually change the Plan to reflect changes occurring within the City. The Comprehensive Plan is intended to be flexible and to provide latitude for more detailed analyses that are commonly a part of zoning and development decisions, decisions that should be consistent with policies established within the Comprehensive Plan. However, *the Comprehensive Plan itself is not intended to be a static document with rigid policies; it is intended to be a dynamic, adaptable guide to help citizens and officials shape Lowell's future on a continual, proactive basis in years to come.*

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Chapter 1: Baseline Analysis

Introduction

The foundation of the comprehensive planning process rests in basic information, such as the historical, statistical and factual information about the community. The *Baseline Analysis* consists of documentation of such information by presenting an overview of the City's history, as well as its social and economic characteristics. It also gives a general insight into the community's growth and development patterns. All of these together are essential for a clear understanding of the physical and social composition of the City. The primary objective of this chapter is to document current physical and socioeconomic (demographic) conditions within Lowell, and to identify various opportunities and constraints the community must consider in addressing and shaping its future form and character. The secondary objective of the *Baseline Analysis* is to ensure that the information being used in the planning process accurately portrays the community and its needs. The identification of major issues within the community begins early in the comprehensive planning process, and serves as a basis for creating the following components of the *Baseline Analysis*:

- Historical Background,
- Regional Relationships (of Lowell to the County and to surrounding communities),
- Physical Factors Influencing Development (Natural and Man-Made),
- Demographic & Socio-Economic Characteristics,
- Existing Land Use Characteristics, and
- Existing Housing Characteristics.

Each section contains information pertaining to the topic, as well as graphic support, where appropriate. The *Baseline Analysis* includes the identification of other issues that will be addressed in the formulation of the Comprehensive Plan for the City of Lowell. It also forms the basis for formulating the goals and objectives pertaining to various aspects of the community, and is instrumental in generating the final recommendations of the Comprehensive Plan.

Historical Background [1]

Lowell was founded on its present site in 1881 after the completion of the St. Louis, San Francisco Railroad. The old original plat of Lowell was homesteaded by a Mr. Whitrow, and was later owned by J.H. McClure, who donated some of his lots to the Frisco for the founding of a town.

[1] *Historical background information taked from "A Comprehensive Plan for Future Development" for Lowell, Arkansas, prepared by the Lowell Planning Commission and City Council, and dated December 15, 1971.*

Lowell's first store belonged to J.W. Main, and it was located on the lot which was later occupied by the old A.C. Mayes store and and later was occupied by Duo Floor Manufacturing. Portions of the building recently housed the Arkansas Forestry Commission until they vacated the space in late 2003. Wold Otey and Captain Eaton had the first drug stores in the town.

The first school was built near the former site of the A.C. Mayes home south of the former Steele Canning Company in 1884. The City's water tower presently occupies this site. The school, a two-story, two-room brick building, was erected through the cooperation of the Masonic Lodge and it was used as a meeting place by the Masons and by the International Order of Odd Fellows (I.O.O.F.).

In 1915, a two-story school building with three classrooms and a stage was constructed. This building served Lowell until the present Lowell Elementary School was built in the early 1950s.

Lowell's first church, a union or community church in which all denominations worshiped, was built in 1888 by donated labor, where the Baptist Church now stands. The land for the church site was donated by J.H. McClure. In 1892, the Presbyterian Church was built and dedicated by the Reverend Peter Carnahan.

U.S. Highway 71 was built and paved through Lowell in 1930, and Interstate 540 was opened through Lowell in the late 1980s.

Lowell remained its original demographic size of one square mile until 1967, when the first annexation was accepted. This annexation was brought about by installation of City water into Lowell in 1966. After several additional annexations, Lowell covered approximately 3,000 square acres when the City's previous Comprehensive Plan was prepared by the Lowell Planning Commission and City Council in December 1971.

Relationship of the City to the Region

The City of Lowell is located in the northwestern section of Arkansas (see **Plate 1-1**). This region, known as the Ozarks, is an ancient plateau that over time has become bisected by erosion and has formed a low-level mountain range.[1-1] The mountains are composed of igneous, limestone, and dolomite rocks with peaks reaching over 2,000 feet.[1-2] Today, this area is well-known as a tourist location and as the headquarters for several major corporations.[1-3]

Additionally, the City is in a unique location compared to the surrounding areas and the rest of the country. Lowell is located south of the City of Rogers, east of the town of Cave Springs, and north of the Cities of Springdale and Bethel Heights. The center of Lowell is approximately 1,350 feet above sea level.[1-4].

The City of Lowell is situated on Interstate Highway 540 in the south central portion of Benton County. Interstate Highway 540 is a major transportation route through the northwest Arkansas region, and it provides access to Lowell in a north/south direction. The northern terminus of Interstate Highway 540 is located in Bentonville, Arkansas and the southern terminus is located in Fort Smith, Arkansas.

Beaver Lake is also a significant regional feature for the City and the region. Located approximately five miles east of Lowell, the Lake was formed as a result of the Beaver Dam built in 1966. [1-5] The dam forms the "birthplace" of the White River, which is famous for trout fishing. [1-6] The Lake is the first in a series of impoundments for the White River. [1-7] The averages depth of the Lake is approximately 60 feet, with the deepest point (200 feet) located in front of the Beaver Dam. [1-8] The Lake has 487 miles of shoreline with limestone bluffs and covers approximately 28,000 acres. Furthermore, with approxiamately 2,008 acres of campgrounds and 650 campsites, residents and tourists have many recreational opportunities available to them due to proximity of the Lake. [1-9]

Another unique regional feature is the three major corporations that call northwest Arkansas home. Wal-Mart, J.B. Hunt, and Tyson Foods all have headquarters within the region. These three companies contribute to the overall economic well-being of the region in that they provide a rich mixture of job choices for the area. One of the positive side-effects of these businesses locating in the Lowell area is the fact that workers must find homes. This, in turn, indicates that a wide variety of housing types is needed to fulfill workers' demands for a diverse mixture of housing types. The increasing demand for close-by housing eventually fuels the demand for more retail and service uses to serve the everyday needs of residents. An increase in the volume of services and products sold locally (in Lowell) will mean more profit for businesses, more jobs for residents, and more tax dollars for City and other local governments to use in providing essential services and facilities. Over the long term, the overall "business engine" that results helps to drive the local economy.

Surrounding Jurisdictions

The following is a listing of surrounding jurisdictions (both county and city) in the vicinity of the City of Lowell. Each listing includes the population for that jurisdiction as obtained from the 2000 US Census.

- **Benton County:**
  - Lowell is located within south central Benton County
  - Population 153,406

- **Washington County:**
  - Located directly to the south of Benton County
  - Population 157,715

- **City of Rogers:**
  - Lowell's northern neighboring city
  - Population 38,829

- **City of Bentonville:**
  - Located northwest of Rogers
  - Population 19,730

- **City of Cave Springs:**
  - Lowell's western neighboring city
  - Population 1,103

- **City of Springdale:**
  - Lowell's largest southern neighboring city
  - Population 45,798

- **City of Bethel Heights:**
  - Lowell's smaller southern neighboring city
  - Population 714

- **City of Fayetteville:**
  - Located south of Springdale and Bethel Heights
  - Population 58,047

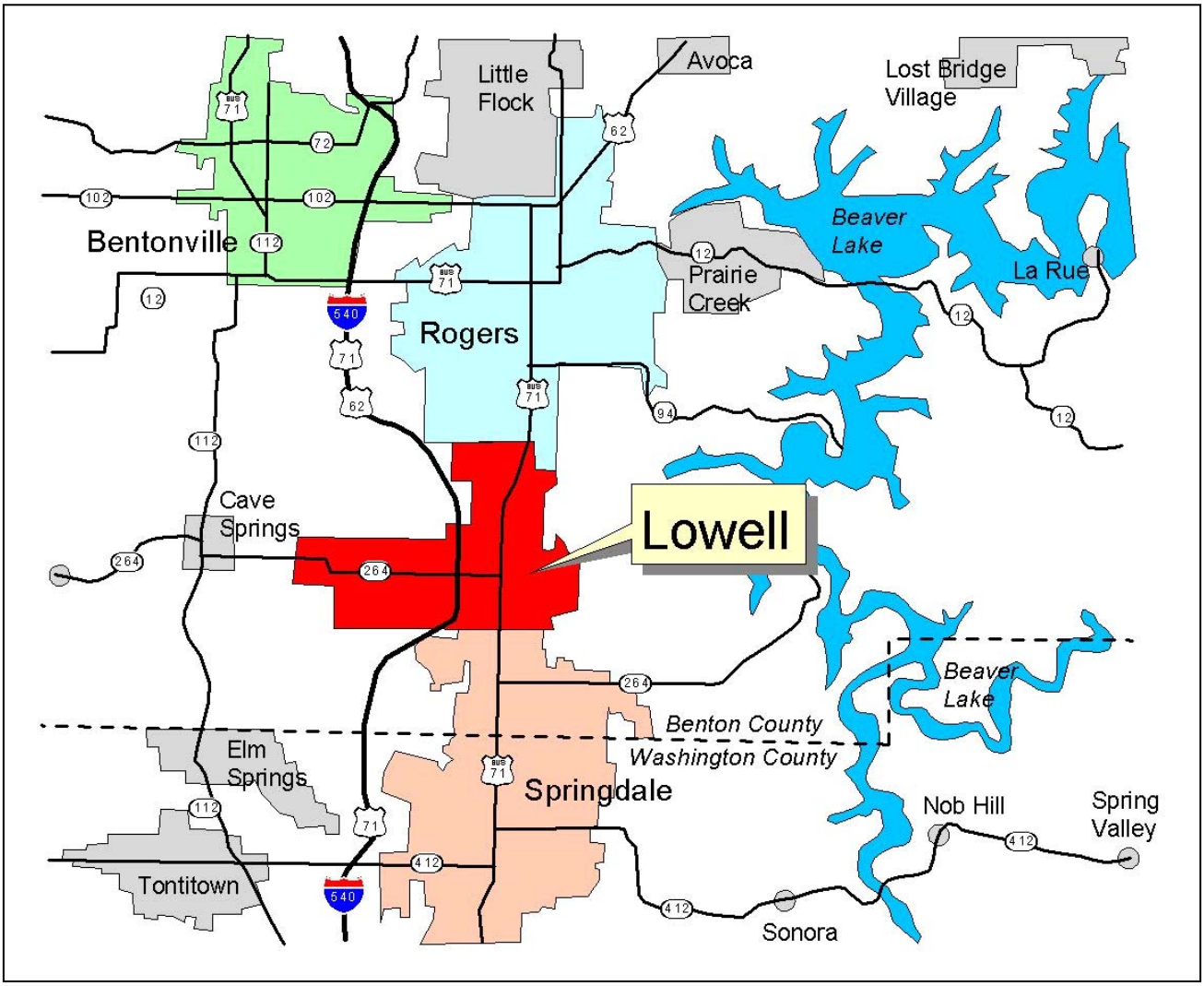


Plate 1-1
RELATIONSHIP OF THE CITY TO THE REGION

Physical Factors Influencing Development

Natural Features

Natural features that may influence the development within a community include elements such as the geology, topography, area soils, and endangered species that are found within the community and in the immediately surrounding area. The interrelationship of these natural features creates the natural environment of a community and may represent challenges to its future growth. The fact that natural features may limit growth is not necessarily negative – in fact, it is often the existence of such features that make a place attractive to people and entice them to locate in certain communities. The following sections are intended to document some of the key natural features of Lowell, represented graphically on **Plate 1-2**. The way in which they may affect the future growth of the City will be addressed in subsequent sections of the Comprehensive Plan.

Geology

The layers of earth in northwest Arkansas consist of a mixture between marine deposits from the early Paleozoic era and terrestrial strata from the late Paleozoic era.[1-11] The rock layers in this region consist of limestone, shale and sandstone.[1-12] Additionally, there are several faults and fracture systems throughout the region.[1-13] The New Madrid fault zone lies in northeast Arkansas and experiences more earthquakes than any other region east of the Rocky Mountains, according to the USGS.[1-14]

Boone Formation [1-15]

The Boone formation dates back to the early to middle Mississippian Periods and covers parts of northern Arkansas, southwestern Missouri and eastern Oklahoma. The geology of this formation "consists of gray, fine- to coarse-grained fossiliferous limestone interbedded with chert. *(Note: Merriam-Webster's online dictionary defines Chert as "a rock resembling flint and consisting essentially of a large amount of fibrous chalcedony with smaller amounts of cryptocrystalline quartz and amorphous silica.")* Some sections may be predominantly limestone or chert. The Boone Formation is well known for dissolutional features, such as sinkholes, caves, and enlarged fissures. The thickness of the Boone Formation is 300 to 350 feet deep in most of northern Arkansas, but as much as 390 feet has been reported."

Soils [1-16]

The following chart is a description of the types of soils found in and around the City of Lowell. The chart details the slope of the land, drainage class, and whether or not the soils are suitable for farmland.

Soil Series

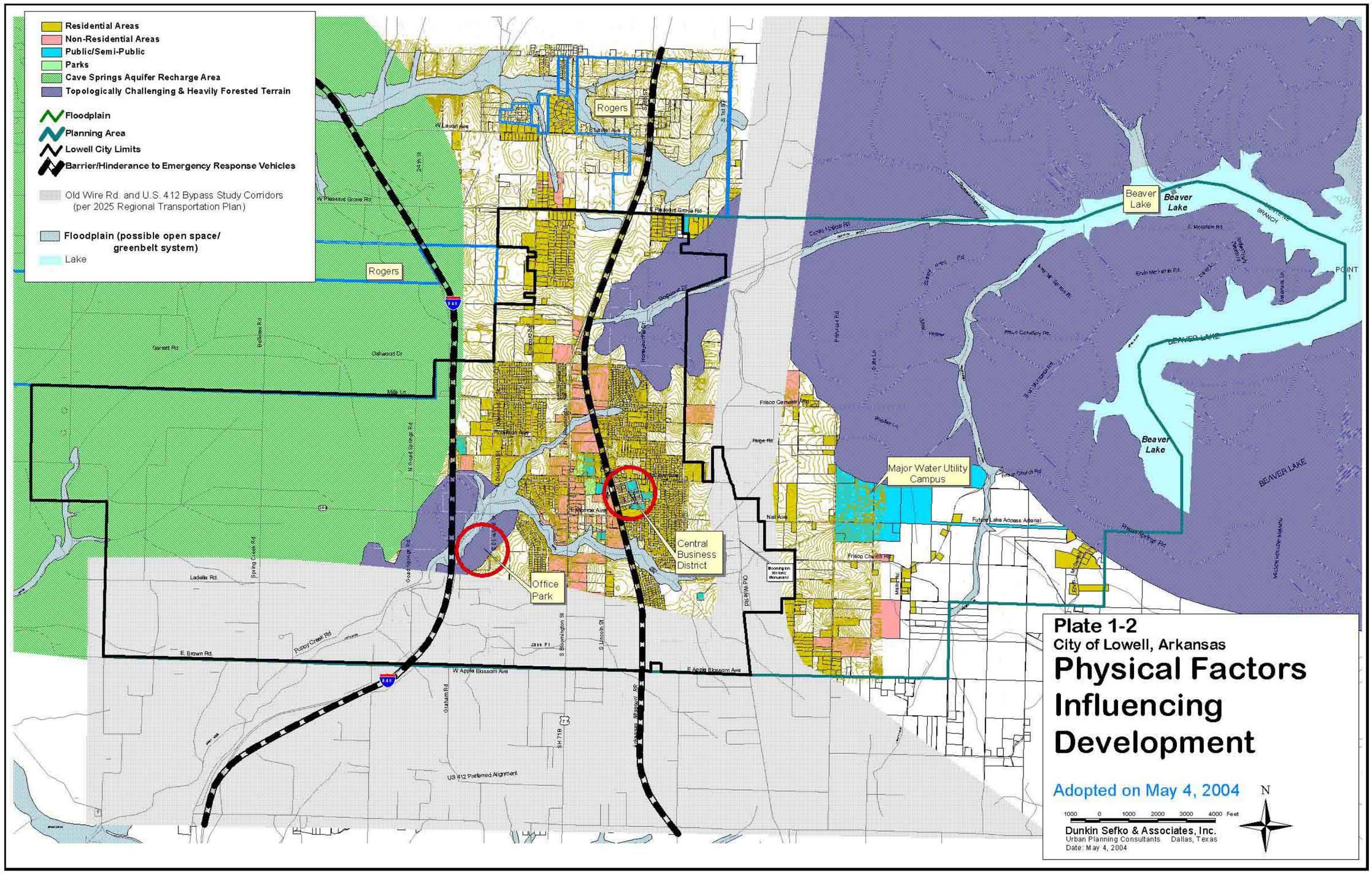
Soil Series	Soil Taxonomic Units	Soil Surface Texture	Drainage Classes	Prime Farmland Classes
Captina	Captina silt loam, 1 to 3 percent slopes	Silty loam	Moderately well	Prime farmland
Cherokee	Cherokee silt loam	Silty loam	Somewhat poorly	Where drained
Johnsburg	Johnsburg silt loam	Silty loam	Somewhat poorly	Where drained
Linker	Linker fine sandy loam, 3 to 8 percent slopes	Fine sandy loam	Well	Prime farmland
Nixa	Nixa cherty silt loam, 3 to 8 percent slopes	Cherty silty loam	Moderately well	Not prime farmland
Nixa	Nixa cherty silt loam, 8 to 12 percent slopes	Cherty silty loam	Moderately well	Not prime farmland
Noark	Noark cherty silt loam, 12 to 20 percent slopes	Very cherty silty loam	Well	Not prime farmland
Noark	Noark cherty silt loam, 8 to 12 percent slopes	Very cherty silty loam	Well	Not prime farmland
Peridge	Peridge silt loam, 1 to 3 percent slopes	Silty loam	Well	Prime farmland
Secesh	Secesh gravelly silt loam, occasionally flooded	Silty loam	Well	Prime farmland
Tonti	Tonti cherty silt loam, 3 to 8 percent slopes	Cherty silty loam	Moderately well	Not prime farmland

Source: University of Arkansas (Arkansas Soils Information System)

The following soil descriptions are direct excerpts from the United States Department of Agriculture's (USDA) website describing different soil classifications: [1-17]

Captina:
"The Captina series consists of moderately well drained, slowly permeable soils on nearly level to moderately sloping uplands and old stream terraces of the Ozark Highlands. They formed in a thin mantle of silty material and the underlying colluvium and residuum weathered from limestone, cherty limestone and dolomite, or siltstone. Slopes range from 1 to 12 percent. Mean annual temperature is 56 degrees F., and mean annual precipitation is 45 inches."

Cherokee:
"The Cherokee Series is very deep, somewhat poorly drained soils that formed in fine textured sediments of the Cherokee Prairies. Slope ranges from 0 to 3 percent. The mean annual precipitation is 35 to 45 inches and the mean annual air temperature is 57 to 65 degrees F."


Residential Areas
Non-Residential Areas
Public/Semi-Public
Parks
Cave Springs Aquifer Recharge Area
Topologically Challenging & Heavily Forested Terrain
Floodplain
Planning Area
Lowell City Limits
Barrier/Hinderance to Emergency Response Vehicles
Old Wire Rd. and U.S. 412 Bypass Study Corridors (per 2025 Regional Transportation Plan)
Floodplain (possible open space/ greenbelt system)
Lake
Rogers
Beaver Lake
Major Water Utility Campus
Central Business District
Office Park
US 412 Preferred Alignment
Plate 1-2
City of Lowell, Arkansas
Physical Factors Influencing Development
Adopted on May 4, 2004
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Dunkin Sefko & Associates, Inc.
Urban Planning Consultants Dallas, Texas
Date: May 4, 2004

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Johnsburg:
"The Johnsburg series consists of very deep, somewhat poorly drained, very slowly permeable soils that formed in loess or other silty material and the underlying loamy residuum weathered from interbedded sandstone, siltstone, and shale. These soils are on hills, and have slopes ranging from 0 to 6 percent. Mean annual temperature is 54 degrees F, and mean annual precipitation is 42 inches."

Linker:
"The Linker series consists of moderately deep well drained, moderately permeable soils that formed in loamy residuum weathered from sandstone. These soils are on broad plateaus, mountains and hilltops and benches. Slopes are dominantly 1 to 15 percent but range to 30 percent."

Nixa:
"The Nixa series consists of very deep, moderately well drained, very slowly permeable soils on upland ridgetops and sideslopes of the Ozark Highlands. These nearly level to steep soils formed in loamy residuum weathered from cherty limestone. Slopes range from 1 to 35 percent."

Noark:
"The Noark series consists of very deep, well drained, moderately permeable soils that formed in colluvium and clayey residuum from cherty limestones. These soils are on nearly level to very steep uplands of the Ozark Highlands. Slopes range from 1 to 45 percent. The mean annual temperature is about 56 degrees F., and the mean annual precipitation is about 42 inches."

Peridge:
"The Peridge series consists of very deep, well drained, moderately permeable soils that formed in colluvium and residuum from interbedded limestone, sandstone and shale. These soils are on nearly level to moderately steep, broad uplands in the Ozarks of Arkansas and Missouri. Slopes are dominantly less than 8 percent, but range to 20 percent. Near the type location, the mean annual precipitation is about 45 inches and the mean annual temperature is about 58 degrees."

Secesh:
"The Secesh series consists of very deep, well drained, moderately permeable soils on floodplains, stream terraces, and footslopes. They formed in about 2 feet of loamy material and the underlying cherty residuum or alluvium from limestone and sandstone. Slopes range from 0 to 8 percent. The mean annual temperature is 56 degrees F, and mean annual precipitation is 44 inches."

Tonti:
"The Tonti series consists of very deep, moderately well drained, slowly permeable soils that formed in residuum from cherty limestone. These nearly level to moderately sloping soils are

on uplands of the Ozark Highlands. Slopes range from 1 to 12 percent. The mean annual soil temperature is about 56 degrees F. and mean annual precipitation is about 45 inches."

Vegetation[1-18]

Vegetation in northwest Arkansas is primarily hardwood. Oak, hickory and other deciduous trees are common along the steep, mountainous areas.[1-19] Occasionally, evergreens, such as cedar or pines, are found mixed throughout the various types of vegetation. In addition, the less sloping areas tend to be used for pasture and forage production.[1-20]

Climate

The climate of the region allows for a distinction between the four seasons. Typically, most people enjoy various outdoor activities throughout the year because of the diverse and distinct weather patterns and seasonal variations.

Table 1-1
Climatic and Environmental Profile
City of Lowell, Arkansas

Average January high	44°
Average January low	22°
Average July high	89°
Average July low	66°
Highest recorded temperature	114°
Lowest recorded temperature	-16°
Annual Precipitation	46.92 inches
Annual snow fall*	6 inches
Average relative humidity*	55%

Source: www.weather.com
*www.fayettevilletourism.com (Fayetteville area)

Aquifers: Ozark Plateaus Aquifer System[1-21]

Northwest Arkansas is positioned above the Ozark Plateaus Aquifer System. This system contains three aquifers: the Springfield Plateau, the Ozark, and the St. Francois Aquifers. The three aquifers are generally positioned one on top of the other. The Springfield Plateau Aquifer is closest to the surface, followed by the Ozark in the middle, and then the deepest aquifer is the St. Francois.

The Ozark Plateaus Aquifer System stretches across northern Arkansas, northeastern Oklahoma, southeastern Kansas, and southern Missouri. [1-22]

Ground water is very important to the state of Arkansas. "According to the 1995 figures of the US Geological Survey, Arkansas ranks fourth in the US for the amount of ground water usage, trailing only the states of California, Texas, and Nebraska." [1-23] Agricultural irrigation is the primary use for underground water with a smaller portion going to human consumption.[1-24] The Ground Water Protection Council reports that, in the state of Arkansas, "about 60 percent of the public-supply systems and 40 percent of the population rely on (use) the state's ground water." [1-25]

Springfield Plateau Aquifer

This aquifer is the most widely used source of ground water for the people of Benton County.[1-26] Another name for this aquifer is the Boone-St. Joe, which represents the geological formations that form the aquifer.[1-27] "The Springfield Plateau Aquifer consists of interbedded Mississippian limestone and chert that generally yield only small volumes of water wells and is used primarily as source of water for domestic and stock watering wells." [1-28]

The aquifer is typically 200 to 400 feet deep, but can reach depths of more than 4,000 feet below sea level.[1-29] Deep wells in this aquifer tend to be cost-prohibitive. Wells drilled into the Springfield Plateau Aquifer produce from one gallon per minute to more than 75 gallons per minute, with the average well producing approximately five gallons per minute.[1-30]

Cave Springs Cave and Recharge Area

Cave Spring Cave is a unique natural landmark in northwestern Arkansas. The cave and its recharge zone are located west of the City of Lowell, and they pose significant environmental issues that could affect development in those portions of the City west of Interstate Highway 540.

The Arkansas Natural Heritage Commission owns the Cave Springs Cave Natural Area, located in Cave Springs, Arkansas.[1-31] "The cave complex is primarily a phreatic (water) conduit system. This cave system is formed in Mississippian-aged limestones with the ceiling composed of the less soluble, chert-filled Boone formation and the passageways dissolved from the purer limestone of the St. Joe formation." [1-32]

The major environmental concern for this area is that continued pollution will adversely affect both rural residents using wells in the area, as well as the various forms of wildlife living in the cave such as the Ozark Cavefish (Amblyopsis rosae).

The ground in the Ozark Plateaus has many karst features such as caverns, underground streams, fissures and sinkholes that create an intricate ground water flow system.[1-33] As a result of this intricate ground water flow system, rapid and complex interactions occur between ground and

surface water.[1-34] According to the US Geological Survey's National Water Quality Assessment Program,

> "Where the rocks of the Ozark Plateaus' aquifers are exposed at the surface, the aquifer is potentially vulnerable to contaminants being transported quickly from the surface into the aquifer through sinkholes or losing streams. Contaminants may then be carried along solution channels, fractures, and conduits to eventually be intercepted by wells or discharged at springs." [1-35]

Rodney D. Williams pointed out the same concern for contamination in the Cave Springs recharge zone in his report, *"Water Quality and Groundwater Recharge for the Cave Springs Complex and Associated Streams Near Cave Springs, Arkansas."* This report was a thesis for a Master of Science in Civil Engineering and the result of a contract between the Arkansas Department of Pollution Control and Ecology and the University of Arkansas. Williams discussed the terrain and how the ground water could easily be contaminated in the Cave Springs area:

> "In terrain of this type, groundwater is not subjected to as much natural filtration as it would be in more granular soils. A relatively thin layer of topsoil coupled with this lack of natural subsurface filtration makes ground water in carbonate terrain more susceptible to pollution from surface sources." [1-36]

The Arkansas Water Resources Center (AWRC), at the University of Arkansas in Fayetteville, published several reports that echoed the same concerns that the USGS and Rodney D. Williams had:

> "The fractured and dissolved carbonate terrain (karst) of Northwest Arkansas is highly susceptible to pollution from land application of animal wastes and other waste disposal practices… Karst terrains allow livestock-related bacteria to be transported by water from the surface, through the aquifer, and back out through resurgent springs. Bacterial contamination (especially from septic system leachate) is considered the most serious threat to Ozark groundwater quality. Seventy-eight percent of the wells and an estimated 90% of the springs in Northwest Arkansas are contaminated with coliform bacteria *(Definition: bacteria that commonly inhabit the intestines of humans and other vertebrates and is useful in measuring the amount of water pollution by feces*[1-37]*).* The spring issuing out of Cave Springs Cave has an exceptionally high fecal pollutant load with average fecal coliform counts in the thousands (MPN/100mL) and peak storm flow counts approaching one hundred thousand (MPN/100mL)." [1-38] (23)

This report points out that the source of fecal (coliform) bacteria originated from the recharge zone, and does not likely come from the bats living in the cave.[1-39] The AWRC report lists septic system leachate, livestock manure, and sewage sludge as possible sources of bacterial pollution.[1-40]

The report came to the conclusion that fecal bacteria (pollution) originates from the surface and is being flushed into the cave and groundwater during storms.[1-41]

Similarly, William's report points out the existing sources of pollution, and it focuses upon agricultural externalities. He cites that poultry operations apply chicken litter to the land with little regulatory control over locations sites or amounts:

> "There are cases where litter from poultry facilities is stockpiled (uncovered) on the surface until it can be spread. Dead poultry and other animals are often disposed of in uncovered, unlined pits. Dead poultry are also occasionally disposed of by merely dumping them into the head of a hollow or other natural depression. Practices such as this could be highly detrimental to ground water quality. Pesticides, herbicides and chemical fertilizer are also routinely applied to portions of the study area (recharge zone). The shallow topsoil and karst features in the region could allow these organic and chemical pollutants to enter the groundwater unfiltered and undiluted" [1-42]

The original route of Interstate Highway 540 was rerouted outside of the Cave Springs recharge zone.[1-43] The major concern with rerouting the highway was to reduce the potential of contamination from construction activities and possible chemical spills along the completed highway. According to Williams' report, the recharge zone is actually larger than was previously thought.[1-44] Therefore, the existing path of US Highway 71 (Interstate Highway 540), despite efforts to avoid the recharge zone, is connected and actually crosses over the edge of the Cave Springs recharge zone. The recharge zone is now thought to exist adjacent and west of Interstate Highway 540, and extending east of Interstate Highway 540 just northwest of Lowell's City limits around the intersection of East Pleasant Grove Road and Interstate Highway 540.[1-45] Unfortunately, if a major chemical or fuel spill occurred anywhere in the recharge area, a hazardous material response team would have very little time to respond because the karst formations quickly transport pollutants to sensitive areas.[1-46] (pg25 June 2001)

The critical areas for pollution within the recharge area, according to Williams, are intermittent stream segments. He further states that any type of development that would leave pollutants in these areas should be carefully monitored.[1-47] Any major pollution deposits in these streams could easily find its way into the ground water system.[1-48]

Overall, many of the authors of these various reports believe it is important to monitor and regulate what occurs on the surface in the form of human development to ensure that the storm runoff flowing into the recharge zone will not further pollute the groundwater. The authors of the Arkansas Water Resources Center report believe the "recharge zone merits special protection." [1-49] Williams states that "development along the portion of Highway 71 bordering the recharge area should be carefully examined for potential water pollution problems and environmental impact." [1-50] (51)

The two groups that will benefit the most from non-polluted ground water are the people who use well water and the wildlife in the cave. (Some wildlife species, such as the Ozark Cavefish, are listed as threatened by the US Fish and Wildlife Service.)

In conclusion, Williams establishes the overall quality of the water in the area as "relatively good" compared to applicable water quality standards, but the Cave Springs area is easily susceptible to

pollution from developments.[1-51] He ends his report with three recommendations concerning Cave Springs Cave and the recharge area that are applicable to the Comprehensive Plan:

1) "To protect aquatic life in the spring system and maintain the quality of residential water supplies, land and water resource management plans should be considered for the recharge area." [1-52]

2) "New development in the recharge area should be evaluated for pollution potential. Items of particular concern would be waste streams generated, water use, and potential for toxic spills or other forms of pollution." [1-53]

3) "If chemical spills should occur along roadways bordering or crossing the spring system's recharge area, cleanup must be prompt and effective. Hazardous material removal teams and local authorities should be made aware of the sensitive nature of this area." [1-54]

Ozark Aquifer [1-55]

The Ozark Aquifer is the most extensive aquifer in the Ozark Plateaus Aquifer System. This aquifer stretches further south than the other two aquifers in the system. Limestone, dolomite, sandstone and minor chert and shale beds from the Late Cambrian to Middle Devonian age form the aquifer.

According to the US Geological Survey, "the aquifer serves as a source of water chiefly for agricultural and domestic purposes but supplies some water for municipal and industrial uses."

The Ozark Aquifer is the thickest aquifer being over 5,000 feet thick in the north central portion of the state. Also, most of the water is obtained from only a few wells. Wells can yield an average of 60 gallons per minute, and a few wells can produce up to 730 gallons per minute.

St. Francois Aquifer [1-56]

The St. Francois is the third and final aquifer that comprises the Ozark Plateaus aquifer system. In northern Arkansas, the aquifer can reach depths from 1,500 to more than 4,000 feet, and has a general thickness of 250 feet. "The aquifer is not used as a source of water in northern Arkansas because the depth to the top of the aquifer makes the cost of drilling and completing wells in the aquifer prohibitively expensive."

Significant Bodies of Water

Beaver Lake[1-57]

The lake covers approximately 28,000 acres, has approximately 487 miles of shoreline, and is the first impoundment of the White River System. The lake offers diverse types of recreational opportunities such as fishing, boating and camping activities for visitors.

The US Army Corps of Engineers constructed a variety of parks and other facilities along and near the lake's shores. The lake area currently offers paved access roads, ten developed parks, approximately 2,008 acres of campgrounds, and more than 650 individual campsites. Additional services and facilities offered in various lake sites include picnic areas, swimming beaches, hiking trails, boat launches, amphitheaters, fire-rings, places for drinking water, showers and restroom facilities.

Creeks

The following is a listing of creeks that traverse or are located near the City of Lowell:

- Puppy Creek: Puppy Creek begins in the east part of Lowell and cuts through the middle of the City and then exits in a southwesterly direction. The creek eventually empties into Spring Creek, north of the Benton County border with Washington County. Part of the creek borders the Cave Springs' recharge area.[1-58]
- Cross Creek: Cross Creek is located to the west of Lowell and East of Cave Springs. The vast majority of the creek travels through the Cave Springs' recharge area. The creek exits the recharge area and empties into Spring Creek southeast of the City of Cave Springs.[1-59]
- Spring Creek: This creek is not located in the City of Lowell, but it serves as a larger creek into which the Puppy and Cross Creeks empty. Spring Creek merges and feeds into the Osage Creek south of Cave Springs.
- Osage Creek: This creek begins in the northwestern part of Lowell and flows to the north. It eventually turns south and is fed by smaller creeks and continues in a southern direction on the east side of Cave Springs. This is another creek that travels across the Cave Springs recharge area, and if polluted can cause ground water quality issues.[1-60]
- Phillips Creek: Phillips Creek is located to the east of Lowell. It runs in a northern direction, beginning around the City of Bethel Heights. The creek empties into Beaver Lake, northeast of the City of Lowell.

Endangered Species:[1-61]

The following are endangered or threatened species for the state of Arkansas, according to the Arkansas Game and Fish Commission: (*Indicates species that have been observed in the Cave Springs Cave, according to Arkansas Water Resources Center reports from authors G.O. Graening and A.V. Brown[1-62])

*Gray Bat: *Myotis grisescens*
- Federal Listing: Endangered; April 28, 1976
- Status: Improving

*Indiana Bat: *Myotis sodalis*
- Federal Listing: Endangered; March 11, 1967
- Status: Declining

*Ozark Cavefish: *Amblyopsis rosae*
- Federal Listing: Threatened; November 1, 1988
- Status: Improving

*Cave Crayfish: *Cambarus aculabrum and C. zophanastes*
- Federal Listing: Endangered; April 7, 1987 (C. zophanastes)
- Federal Listing: Endangered; May 27, 1993 (C. aculabrum)
- Status: Stable

Ozark Big-Eared Bat: *Plecotus townsendii ingens*
- Federal Listing: Endangered; November 30, 1979
- Status: Unknown

American Burying Beetle: *Nicrophorus americanus*
- Federal Listing: Endangered; July 13, 1989
- Status: Declining

Leopard Darter: *Percina pantherina*
- Federal Listing: Threatened; January 27, 1978
- Status: Stable

Bald Eagle: *Haliaeetus leucocephalus*
- Federal Listing: Upgraded from endangered to threatened throughout most of the lower 48 states; 1994
- Status: Improving

American Peregrine Falcon: *Falco peregrinus anatum*
- Federal Listing: Endangered; June 1, 1970
- Status: Improving

Arkansas Fatmucket: *Lampsilis powelli*
Federal Listing: Threatened; April 5, 1990
Status: Unknown

Curtis'Pearlymussel: *Epioblasma florentina curtisi*
Federal Listing: Endangered; June 14, 1976
Status: Declining

Pink Mucket Pearlymussel: *Lampsilis abrupta*
Federal Listing: Endangered; June 14, 1976
Status: Declining

Fat Pocketbook: *Potamilus capax*
Federal Listing: Endangered; June 14, 1976
Status: Improving

Ouachita Rock Pocketbook: *Arkansia wheeleri*
Federal Listing: Endangered; October 23, 1991
Status: Declining

Speckled Pocketbook: *Lamsilis streckeri*
Federal Listing: Endangered; February 28, 1989
Status: Unknown

Magazine Mountain Shagreen: *Mesodon megazinensis*
Federal Listing: Threatened; April 17, 1989
Status: Stable

Pallid Sturgeon: *Scaphirhynchus albus*
Federal Listing: Endangered; September 6, 1990
Status: Declining

Least Tern: *Steerna antillarum*
Federal Listing: Endangered; May 28, 1985
Status: Improving

Red-Cockaded Woodpecker: *Picoides borealis*
Federal Listing: Endangered; October 13, 1970
Status: Declining

American Alligator: *Alligator mississippiensis*
Federal Listing: Threatened only by similarity of appearance
Status: Recovered

Man-Made Features

Man-made features, such as major thoroughfare routes, transportation facilities and educational institutions, can be major factors that impact urban development patterns within a city and its immediate area. The following is a brief discussion of several of these factors.

Major Vehicular Transportation Routes

A more detailed discussion of each of these routes will be included later in the Comprehensive Plan. The following is a brief summary to provide a context for later discussions.

Interstate Highway 540 / US Highway 71[1-63]

Interstate Highway 540 traverses the City of Lowell in a north/south direction, and serves as the region's primary north/south vehicular transportation route. It has its northern terminus in Bentonville, and its southern terminus is in Fort Smith, Arkansas.

US Highway 71 Business[1-64]

US Highway 71 Business takes a north/south route through the central portion of the City, and it generally parallels the route of Interstate Highway 540 and the Arkansas & Missouri Railroad. US Highway 71 Business now represents the primary vehicular route that connects the downtown area of Lowell with the downtown areas of Rogers to the north and Springdale to the south.

Arkansas State Highway 264[1-65]

State Highway 264 is Lowell's primary east/west vehicular route. This highway, which in most places is still a two-lane asphalt roadway, comes into Lowell from the south from Bethel Heights (sharing a portion of the same path as US Highway 71 Business from Jackson Avenue in Bethel Heights to Monroe Road in Lowell), then it turns west from Lowell's downtown area to proceed west through Cave Springs. State Highway 264 is Lowell's main access route to the Northwest Arkansas Regional Airport located approximately five miles west of Lowell in Highfill, Arkansas.

Air Transportation

Northwest Arkansas Regional Airport (XNA)

The Northwest Arkansas Regional Airport is located approximately five miles west of Lowell on State Highway 264 in Highfill, and serves as a regional airport for northwest Arkansas in that it can accommodate larger jets and commercial passenger service.[1-70] The runway at XNA is 8,800 feet long.[1-71] The Northwest Arkansas Regional Airport Authority (NWARAA), which is comprised of five cities and two counties, owns the airport.[1-72] The cities of Fayetteville, Rogers, Bentonville, Siloam Springs and Springdale, along with the counties of Benton and Washington, comprise the NWARAA.[1-73] The airport has four aircrafts based on the field, an handles an average of 113 aircraft operations per day.[1-74]

Rogers Municipal Airport - Carter Field (ROG)

The Rogers Municipal Airport is located approximately two miles north of Rogers, Arkansas at an elevation of 1353 feet above sea level.[1-66] It is a public airport that is owned by the City of Rogers, and it has a paved runway 6,011 feet long.[1-67] Services such as hangar facilities, air ambulances, flight instruction, aircraft rental/sales, and aerial surveying are available.[1-68] The airport has 118 aircrafts based on the field, and handles an average of 175 aircraft operations per day.[1-69]

Siloam Springs - Smith Field (SLG)

This airport is located approximately three miles northeast of Siloam Springs.[1-75] The runway at Smith Field is 4,999 feet long, and the City of Siloam Springs owns the facility.[1-76] This air field has 28 aircrafts based on the field, and handles an average of 89 aircraft operations per day.[1-77]

Springdale Municipal Airport (SPZ)

The Springdale Municipal Airport is located approximately one mile south of Springdale.[1-78] The runway at the airport is 5,302 feet long, and the City of Springdale owns the facility.[1-79] This airport has 130 aircrafts based on the field, and handles an average of 163 aircraft operations per day.[1-80]

Fayetteville Municipal Airport – Drake Field (FYV)

The Fayetteville Municipal Airport is located three miles south of Fayetteville.[1-81] The runway at Drake Field is 6,006 feet in length,[1-82] and the City of Fayetteville owns the facility.[1-83] The airport has 73 aircrafts based on the field, and handles an average of 123 aircraft operations per day. [1-84]

Rail Transportation

Arkansas & Missouri Railroad

Railroads have historically been a major catalyst for the growth of communities throughout Arkansas and the US, generating concentrations of businesses and residential areas. Although local growth and related economies are generally becoming less reliant upon railroads as other modes of transporting goods have become increasingly utilized, railroads can still be considered as a great resource for maintaining existing local industries and for attracting future industrial development to an area.

The Arkansas & Missouri Railroad line closely follows State Highway 71 Business in a north/south direction through the central portion of the City. There are commercial, and some industrial, land uses along the west side of the rail line, and most land use along the east side of the rail line is residential. The rail line is still actively used by commercial and industrial businesses in the region.

Education

University of Arkansas at Fayetteville[1-85]

The University of Arkansas at Fayetteville is a public university. It has a total enrollment of approximately 13,000 students, and it was founded in 1871. In-state tuition is $3,573 and out-of-state tuition is $9,945 a year (approximately nine percent of the student population is from out-of-state). The most popular majors at the University of Arkansas at Fayetteville are marketing and transportation, finance and information systems. The closest commercial passenger airport is the Northwest Arkansas Regional Airport in Highfill.

John Brown University[1-86]

This private university, located in Siloam Springs, has a total enrollment of 1,393 students, and it was founded in 1919. The tuition for any student is $9,482 a year with 65 percent of the student body being from outside of the state. Academically, the university offers various associate, bachelors and masters degrees.

Northwest Arkansas Community College[1-87]

Located in Bentonville, the Northwest Arkansas Community College has a total enrollment of 2,963 students, and it was founded in 1989. In-state tuition is $2,520, and out-of-state tuition is $2,850 a year. The college offers several associates degrees including nursing, art and computer programming.

Northeastern State University (Oklahoma)[1-88]

This public university is located in Tahlequah, Oklahoma. It has a total enrollment of 7,611 students, and it was founded in 1846. In-state tuition is $1,800 and out-of-state tuition is $4,200 a year (approximately five percent of the student population is out-of-state). The most popular majors are education and business.

College of the Ozarks[1-89]

This private university, founded in 1906, is located in Point Lookout, Missouri, and has a total student enrollment of 1,395. Tuition for one year is approximately $10,600[1-90] for any student (33 percent of the student population is out-of-state). The most popular majors are education, business and agriculture. The closest airport to the College of the Ozarks is the Springfield Branson Regional Airport.

Demographic & Socio-Economic Characteristics

There are many elements that contribute to a growing, dynamic city, including those that have been previously discussed within the *Baseline Analysis*, such as regional influences, natural features, and thoroughfares. However, perhaps the most important element of a city is the people. It is the residents of Lowell, the people that live and work in the City, that will most influence the City's future. This section is an analysis of the demographic and socio-economic characteristics of the citizens of Lowell.

Overview

In 2000, the total land area of Lowell was approximately 6.26 square miles (US Census). At a population of 5,013 persons (2000 US Census), this translates to an overall population density of approximately 800.7 persons per square mile. This compare to other nearby cities, as follows:

City	Persons Per Square Mile	Population	Land Area
Bella Vista	252.8	16,582	65.58
Bentonville	928.9	19,730	21.24
Cave Springs	151.7	1,103	7.27
Decatur	573.0	1,314	2.29
Elm Springs	276.9	1,044	3.77
Gentry	908.3	2,165	2.38
Gravette	775.1	1,810	2.34
Little Flock	341.9	2,585	7.56
Lowell	**800.7**	**5,013**	**6.26**
Rogers	1,158.0	38,829	33.53
Siloam Springs	1,027.2	10,843	10.56
Springdale	1,463.0	45,798	31.30
Sulphur Springs	667.1	671	1.01

Source: U.S. Census

City of Lowell Population Growth

Lowell has experienced dramatic changes in growth over the recent years, as seen in **Table 1-2**. In the year 2000, the city grew 309.6% over what it was in 1990, tripling in size during this ten-year period. Another decade when Lowell experienced a large amount of growth was between 1960 and 1970 when the City grew from 277 persons to 653 persons, a 135.7% increase. In the next decade

the growth continued at a more moderate pace (65.1% increase), with the town's population reaching 1,078 by 1980.

Table 1-2
Population Change
City of Lowell, Arkansas

Year	Population	Population Change	Percent Change
1910	193	NA	NA
1920	227	34	17.6%
1930	262	35	15.4%
1940	271	9	3.4%
1950	341	70	25.8%
1960	277	-64	-18.8%
1970	653	376	135.7%
1980	1,078	425	65.1%
1990	1,224	146	13.5%
2000	5,013	3,789	309.6%

Source: University of Arkansas

County Population Growth

Table 1-3 shows Benton County's growth as well as the population growth for the surrounding counties of Carroll, Madison and Washington Counties. A review of Benton County's population numbers reveals that there has been substantial growth every decade since 1960, and Benton County's population had almost caught up with Washington County in the 2000 Census. Benton and Washington Counties are the most populous counties in northwest Arkansas, and these two counties have seen the highest growth rates of those compared. The other two counties, Carroll and Madison, are experiencing noticeable growth, but not at the same levels as Benton and Washington.

Table 1- 3
Population Change for Benton and Surrounding Counties
1910 to 2000

County	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Benton	33,389	36,253	35,253	36,148	38,076	36,272	50,476	78,115	97,499	153,406
Carroll	16,829	17,786	15,820	14,737	13,244	11,284	12,301	16,203	18,654	25,357
Madison	16,056	14,918	13,334	14,531	11,734	9,068	9,453	11,373	11,618	14,243
Washington	33,889	35,468	39,255	41,114	49,979	55,797	77,370	100,494	113,409	157,715

Source: University of Arkansas

Population Growth in the City of Lowell and Surrounding Communities

Table 1-4 illustrates the population growth for several cities in the northwest Arkansas region, and it shows how Lowell compares to other cities in the region. Every city in the table has experienced growth in the last US Census. The table helps to illustrate the tremendous growth that is occurring in various cities in the northwest Arkansas region.

Table 1- 4
Population Change for Selected Communities
1910 to 2000

City	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Bella Vista	---	---	---	---	---	---	---	2,589	9,083	16,582
Bentonville	1,956	2,313	2,203	2,359	2,942	3,649	5,508	8,756	11,257	19,730
Cave Springs	---	---	192	285	267	281	469	429	465	1,103
Decatur	246	424	413	358	350	415	847	1,013	918	1,314
Elm Springs	---	---	182	156	217	238	260	781	893	1,044
Gentry	668	724	779	726	729	686	1,022	1,468	1,726	2,165
Gravette	569	754	812	865	894	855	1,154	1,218	1,412	1,810
Little Flock	---	---	---	---	---	---	---	663	944	2,585
Lowell	**193**	**227**	**262**	**271**	**341**	**277**	**653**	**1,078**	**1,224**	**5,013**
Rogers	2,820	3,318	3,554	3,550	4,962	5,700	11,050	17,429	24,692	38,829
Siloam Springs	2,405	2,569	2,378	2,764	3,270	3,953	6,009	7,940	8,151	10,843
Springdale	1,755	2,263	2,763	3,319	5,835	10,076	16,783	23,458	29,941	45,798
Sulphur Springs	500	470	404	435	543	460	503	496	523	671

Source: University of Arkansas

Regional Growth Comparison

Another method of evaluating a community's percentage of growth is to compare it to a larger regional area. Defining Benton County as the region that is most influential on the City of Lowell, and then analyzing Benton's growth along with that of the City allows for a comparative analysis. **Table 1-5** shows the City of Lowell accounted for 3.3 percent of Benton County's overall population in the year 2000. The numbers for the year 2000 show that growth in the City of Lowell accounts for an increased percentage of the County's population, and this trend can probably be expected to continue since Lowell is postured in the middle of the northwest Arkansas growth corridor along Interstate Highway 540.

Table 1-5
Regional Growth Comparison
City of Lowell as Part of Benton County

Year	Lowell Population	Benton Population	Percentage of Benton County in Lowell
1910	193	33,389	0.6%
1920	227	36,253	0.6%
1930	262	35,253	0.7%
1940	271	36,148	0.7%
1950	341	38,076	0.9%
1960	277	36,272	0.8%
1970	653	50,476	1.3%
1980	1,078	78,115	1.4%
1990	1,224	97,499	1.3%
2000	5,013	153,406	3.3%

Source: University of Arkansas

Race, and Ethnic Distribution

As the City of Lowell has continued to grow, it has become more diverse in its ethnic character. **Table 1-6** shows an increase in diversity, which is similar to trends across the country. The group with the largest increase in composition of the City is the Hispanic racial/ethnic group, growing by an additional 4.9% of the City's population to a total of 448 persons (8.9% of the City's population) in 2000, according to the US Census.

Table 1- 6
Race and Ethnic Distribution
City of Lowell, Arkansas

Race/Ethnicity	1990		2000	
	Number	**Percent[1]**	**Number**	**Percent[1]**
White	1,146	95.6%	4,445	88.7%
African American	-	0.0%	39	0.8%
American Indian	22	1.8%	44	0.9%
Asian	-	0.0%	185	3.7%
Other	31	2.6%	205	4.1%
Hispanic (of any race)[2]	48	4.0%	448	8.9%
Total Population	1,199		5,013	

Source: U.S. Census
[1] Inclusion of Hispanic origin in 'of any race,' total will not equal 100.0%
[2] Hispanic origin can be of any race[2]

Age Distribution

The age composition of the population within a city can provide insight into the types of facilities and services that may need to be provided in the future for its changing citizenry. An analysis of age composition, among other population characteristics, can ensure that the Comprehensive Plan is tailored to meet Lowell's needs in the future with respect to provision of services for special population groups such as the elderly, "empty-nesters", young working adults and youth. The age composition for Lowell is shown in **Table 1-7**.

The largest age group in Lowell in the year 2000 was the prime labor force (25-44 years old), and the second largest is the young (0-14 years old) age group. This indicates that there are probably a large number of families with children living within the City, indicative of a probable need for additional schools within the community. The third largest age group is the older labor force (45-64 years old) which could also account for the increased number of school-age children, since people are now generally tending to wait until they are older to have children. The only age group to experience a significant decrease between 1990 and 2000 was the elderly group (65 years old and over). While this indicates that there were actually fewer elderly persons in the City than in the previous Census, Lowell should continue to plan for special services and facilities for this population group because it will probably increase again as current residents age and want to remain in Lowell during retirement.

Table 1- 7
Age Composition and Distribution
City of Lowell, Arkansas

Age Group	1990		2000	
	Number	Percent	Number	Percent
Young (0-14 years)	239	19.9%	1,291	25.8%
High School (15-19 years)	59	4.9%	245	4.9%
College, New Family (20-24 years)	90	7.5%	436	8.7%
Prime Labor Force (25-44 years)	414	34.5%	2,032	40.5%
Older Labor Force (45-64 years)	209	17.4%	753	15.0%
Elderly (65 and over)	188	15.7%	256	5.1%
Total	1,199	100.0%	5,013	100.0%
Median Age	34.2 years*		28.6 Years	

Source: U.S. Census

* Calculated by Dunkin, Sefko, & Associates

Educational Attainment

Trends in the level of educational attainment within a population generally indicate the level of skills and abilities of the community's residents. The level of educational attainment (from the 2000 US Census) is shown for the City of Lowell, Benton County, and the State of Arkansas in **Table 1-8**.

The City of Lowell has a higher percentage of its population (25 years and older) who have attained college degrees (35.6%) than either Benton County (24.9%) or the State of Arkansas (20.7%). This is indicative that the labor force in Lowell is highly educated as compared to the County and the State as a whole. In the City over 83% of the population has at least a high school diploma and some college education, as compared to 80.4% for Benton County and to 75.3% for the State. Lowell's highly educated population may serve to increase the attractiveness of Lowell to businesses in the need of skilled labor and management skills.

Table 1- 8
Educational Attainment -- 2000
City of Lowell, Benton County & The State of Arkansas

Level Attained	City of Lowell		Benton County		State of Arkansas	
	2000	Percent	2000	Percent	2000	Percent
Less than 9th grade	153	5.4%	7,651	7.7%	162,464	9.4%
9th to 12th grade, no diploma	321	11.2%	11,814	11.9%	264,985	15.3%
High school graduate (includes equivalency)	798	28.0%	32,644	32.8%	590,416	34.1%
Some college, no degree	565	19.8%	22,539	22.7%	355,329	20.5%
Associate degree	281	9.8%	4,578	4.6%	69,578	4.0%
Bachelor's degree	558	19.6%	14,443	14.5%	190,427	11.0%
Graduate or professional degree	178	6.2%	5,767	5.8%	98,001	5.7%
Total	**2,854**	**100.0%**	**99,436**	**100.0%**	**1,731,200**	**100.0%**

Source: U.S. Census (For person 25 years and older)

Household Income Levels

Household income levels are often reviewed by large retailers in their research to find potential new locations, and this data may influence the amount of retail land use the City can support. Income is also a factor in the affordability of housing, and therefore can play a role in the future planning of residential areas. **Table 1-9** shows data pertaining to household income for the City of Lowell and for the State of Arkansas, according to the 2000 US Census.

The largest percentage of households in the City of Lowell earn between $50,000 to $74,999 per year, as compared to 16.3% of households in the State in that income bracket. In the State of Arkansas, most households (17.5%) earn between $35,000 to $49,999 per year. Another interesting comparison is the number of Lowell residents who make over $100,000 per year (10.1%), as compared with the number of people in the State who are in these higher income brackets (only 6.0%). The median household income for Lowell ($48,063 per year) is also approximately 49.3% higher than that of the State ($32,182 per year).

From this data, it is evident that the City has a larger portion of residents in the upper income brackets than does the State, and it would be reasonable to say that Lowell's residents probably have commensurately higher levels of expendable income than is the case Statewide.

Table 1-9
Household Income Comparison -- 2000
City of Lowell and The State of Arkansas

Income Level	Lowell		State of Arkansas	
	2000	Percentage of Households	2000	Percentage of Households
Less than $10,000	81	4.5%	139,262	13.4%
$10,000 to $14,999	70	3.9%	89,901	8.6%
$15,000 to $24,999	136	7.6%	174,093	16.7%
$25,000 to $34,999	279	15.6%	156,910	15.0%
$35,000 to $49,999	384	21.5%	182,881	17.5%
$50,000 to $74,999	453	25.3%	170,245	16.3%
$75,000 to $99,999	205	11.5%	67,095	6.4%
$100,000 to $149,999	106	5.9%	39,574	3.8%
$150,000 to $199,999	45	2.5%	10,118	1.0%
$200,000 or more	31	1.7%	12,728	1.2%
Total Number of Households	1,790	100%	1,042,807	100%
Median Household Income	$48,063		$32,182	

Source: U.S. Census

Employment by Occupation and Industry

Employment opportunities can affect the growth of cities. Almost any city is dependent upon the employment opportunities in the regional area. If residents cannot find adequate jobs that suit their educational and labor skill levels, then they will be compelled to relocate elsewhere. One negative effect for a city when people leave is the fact that both property and sales taxes leave along with the people. Furthermore, the city's financial resources are placed under a greater strain to provide the same level of services as it did with a larger tax base. Fortunately, Lowell and the entire northwest Arkansas region have been experiencing population growth, not decline, in recent years and if the robust economy continues, this growth trend in the City and its region should continue.

Table 1-10 outlines the number of jobs by occupational category for the City of Lowell. The largest occupational category for the city's residents in the year 2000 was the *Management, Professional, and Related Occupations* category. This category comprised 37.6% of Lowell's workforce in the year 2000. Ten years prior to that, the same category only comprised 18.8% of the total workforce. This trend shows that the City has experienced significant growth in this highly skilled job category, and affirms the need for a highly educated work force in the City.

The second largest job category is S*ales and Office Occupations*. This category consisted of 31.8% of the City's year 2000 workforce, as compared with only 13.2% of the work force in 1990, and it also doubled in prominence between 1990 and 2000.

Four occupational categories showed a significant decline in prominence between 1990 and 2000: *Service Occupations; Farming, Fishing & Forestry Occupations; Construction, Extraction & Maintenance Occupations; and Production, Transportation & Material Moving Occupations*. Each of these four categories showed a decrease in its respective percentage of the City's population during this time period, indicating that the general trend of occupations in Lowell is probably more toward highly skilled jobs needing high levels of educational attainment.

Table 1- 10
Employment By Occupational Category
City of Lowell, Arkansas

	1990		2000	
Occupation	**Number**	**Percent**	**Number**	**Percent**
Management, professional, and related occupations	118	18.8%	1,017	37.6%
Service occupations	151	24.1%	221	8.2%
Sales and office occupations	83	13.2%	860	31.8%
Farming, fishing, and forestry occupations	34	5.4%	23	0.9%
Construction, extraction, and maintenance occupations	81	12.9%	187	6.9%
Production, transportation, and material moving occupations	160	25.5%	395	14.6%
Total	627	100.0%	2,703	100.0%

Source: U.S. Census

Another way to classify and analyze employment data is by industry. **Table 1-11** reviews the 2000 Census numbers for the City of Lowell, Benton County, and the State of Arkansas. The *Retail Trade* industry was the largest employer group in the City (23.0%) and the County (22.4%), but the *Educational, Health and Social Services* and the *Manufacturing* industries were the two largest employer groups in the State (each slightly over 19%). The second largest industry for both the City's and the County's work force was the *Manufacturing* industry (18.2% for the City, and 20.4% for the County).

The two smallest industries in the City of Lowell were the *Public Administration* (0.6%) and the *Agriculture, Forestry, Fishing and Hunting, and Mining* (0.4%) industries, while the two smallest industries in the County were the *Information* (1.1%) and the *Wholesale Trade* (2.7%) industries.

Table 1-11
Employment By Industry
City of Lowell, Benton County, & The State of Arkansas

Industry	2000					
	Lowell		Benton County		State of Arkansas	
	Number	Percent	Number	Percent	Number	Percent
Agriculture, forestry, fishing and hunting, and mining	12	0.4%	2,328	3.2%	43,665	3.7%
Construction	129	4.8%	4,814	6.7%	82,611	7.0%
Manufacturing	492	18.2%	14,672	20.4%	227,187	19.4%
Wholesale trade	77	2.8%	1,931	2.7%	38,340	3.3%
Retail trade	623	23.0%	16,103	22.4%	152,554	13.0%
Transportation and warehousing, and utilities	290	10.7%	3,919	5.4%	69,611	5.9%
Information	31	1.1%	812	1.1%	25,891	2.2%
Finance, insurance, real estate, and rental and leasing	286	10.6%	3,563	5.0%	56,460	4.8%
Professional, scientific, management, administrative, and waste management services	185	6.8%	4,470	6.2%	63,075	5.4%
Educational, health and social services	353	13.1%	10,130	14.1%	230,491	19.6%
Arts, entertainment, recreation, accommodation and food services	85	3.1%	3,887	5.4%	74,127	6.3%
Other services (except public administration)	125	4.6%	3,653	5.1%	58,629	5.0%
Public administration	15	0.6%	1,689	2.3%	50,758	4.3%
Total	2,703	100.0%	71,971	100.0%	1,173,399	100.0%

Source: U.S. Census

Existing Land Use Characteristics

One of the principal goals that encourages communities to engage in a comprehensive planning process is to provide for the orderly and efficient use of land. Just as a house cannot be successfully constructed without a plan in the form of blueprints, a community cannot be successfully developed without a plan that considers future land use and the interrelationships between different land uses. The foundation of Lowell's *Future Land Use Plan*, which will be determined within the scope of this comprehensive planning process, is rooted in analysis of the City's existing land use pattern.

Market Demand

The way in which Lowell has developed thus far has largely been a product of market demand. The pattern of land use that exists today within the City has evolved to satisfy the needs of the local population as it has grown, both in geographic size and in population. The activities of the residents of a city create a need for a variety of land uses including residential, retail, commercial, recreational, office, and industrial areas. Therefore, the discussion of existing land use will ultimately help the *Future Land Use Plan* reflect local market needs.

Visual Perception

The conversion of vacant land to developed land uses will also affect Lowell's future urban form - its attractiveness and desirability - and the way in which the City is perceived visually by residents and visitors. The relationships of existing and future land uses will not only have an impact upon how Lowell develops economically, but will also shape the character and livability of the community in the years to come. Consideration should always be given to the way in which various land uses add to or detract from the aesthetic appeal of the community.

Existing Land Use Survey – Methodology

In order to analyze the land use trends within Lowell, a visual field survey was conducted by automobile in the fall of 2002 for all areas within the City's limits and its extended planning area. This survey involved detailed parcel-by-parcel observation, analysis and documentation. **Table 1-12** shows the results of this survey, reflecting the existing land use composition within Lowell by categories, and **Plate 1-3** shows a graphic representation of the existing land use pattern, with each parcel of land color-coded and documented by the same categories; the following sections explain the types of land use categories used.

Table 1- 12
Existing Land Use – September, 2002
City of Lowell, Arkansas

Land Use	City Limits Only		Total Planning Area	
	Acres	Percent	Acres	Percent
Single-Family Residential	1,067.5	18.0%	1,579.7	13.7%
Two-Family Residential	15.3	0.3%	15.3	0.1%
Multi-Family Residential	35.4	0.6%	35.4	0.3%
Mobile/Manufactured Home	38.9	0.7%	84.5	0.8%
Public/Semi-Public	40.1	0.7%	642.2	5.6%
Parks and Open Space	10.7	0.2%	10.7	0.1%
Retail	36.8	0.6%	36.8	0.3%
Commercial	387.4	6.5%	519.5	4.5%
Office	92.6	1.6%	92.6	0.8%
Light Industrial	49.0	0.8%	49.0	0.4%
Vacant or Right-of-Way	4,148.3	70.0%	8,457.3[1]	73.4%
Total	**5,922.0**	**100.0%**	**11,523.0**	**100.0%**

Source: Dunkin, Sefko & Associates

[1] Includes the portion of Beaver Lake that lies within Lowell's planning boundary (537.4 acres)

The largest percentage of Lowell's land within its current City limits (70.0%) and within its overall planning area (73.4%), not surprisingly, is either vacant land (i.e., undeveloped, or only being utilized for agricultural purposes), or it is devoted to public rights-of-way for streets, alleys, railroads, etc. The largest existing land use category, other than vacant or right-of-way, is single-family residential (18.0% within the City's limits, and 13.7% within the overall planning area). The amount of land area devoted to retail, commercial and office uses is only about 8.7% within the City's limits (and only about 5.6% in the planning area), which is somewhat low as compared to other similar cities.

Residential Land Use

Residential land use includes land upon which any type of dwelling unit is located, including traditional single-family detached homes, duplexes, townhomes, apartments and manufactured or mobile homes.

Single-Family

This land use type is representative of one-family dwellings, which are traditional detached homes on any lot size; this includes related accessory buildings on the same lot as the primary house structure.

Two-Family

This land use type is representative of duplex dwellings, which are typically two separate dwellings that are attached together with a common wall; this includes related accessory buildings on the same lot as the primary residential structure.

Multiple-Family

This land use type is representative of more concentrated dwelling units (e.g., triplexes, quadriplexes) including traditional apartment dwelling units and related accessory buildings.

Manufactured Home

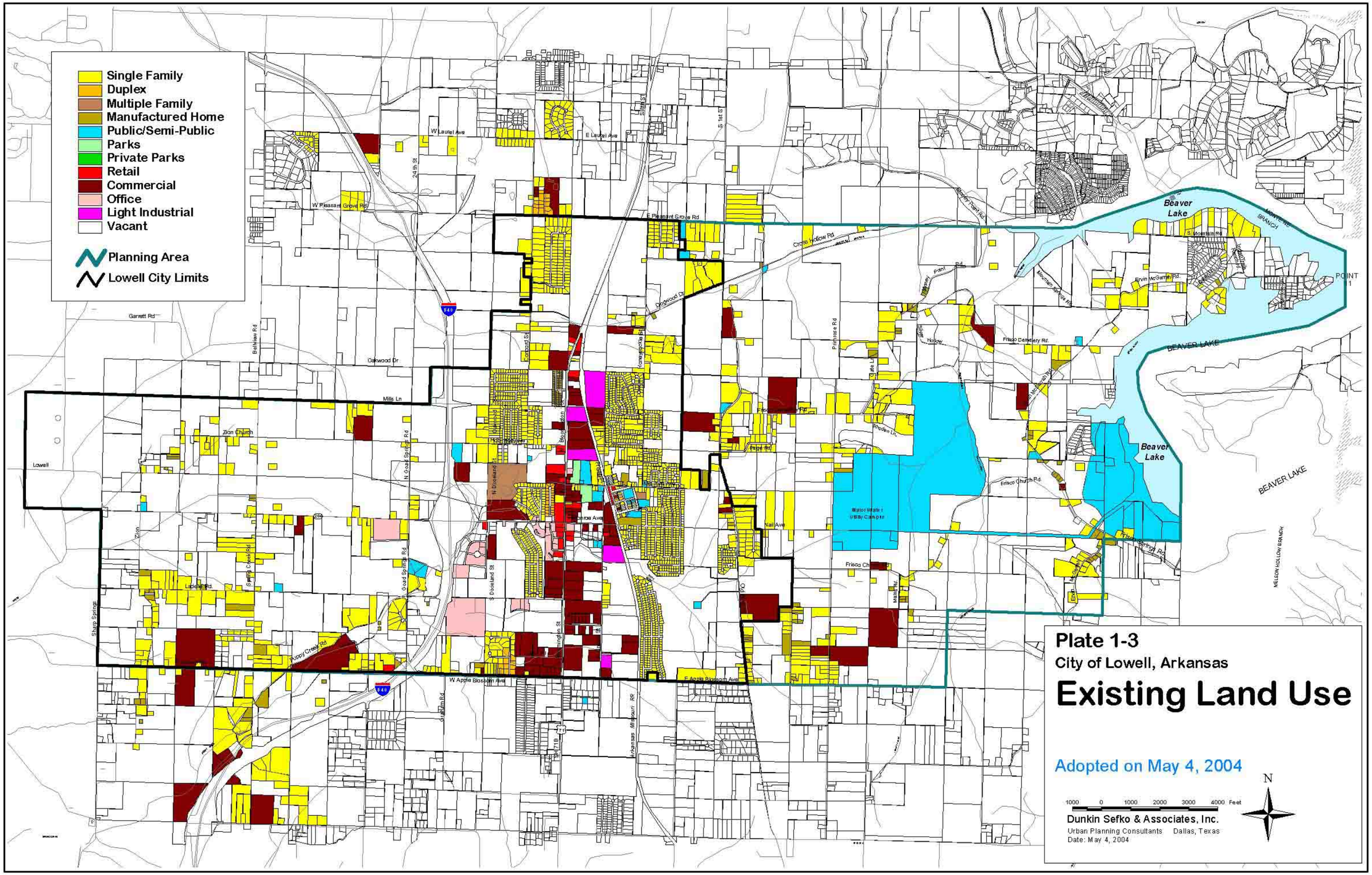
This land use type is representative of manufactured or mobile homes located on a lot or parcel and used as a dwelling unit.

Park & Open Space Land Use

This land use type represents any land used for outdoor recreational purposes, active or passive, such as playgrounds, ballfields, and public open spaces (e.g., outdoor covered areas). It should be noted that any indoor recreation centers would be included in the *Public/Semi-Public* land use category (discussed below), and not within this category, due to the fact that they are contained within a structure.

Public/Semi-Public Land Use

This land use type represents any land upon which a public or semi-public structure is located, and includes any related parking areas or accessory buildings. *Public/Semi-Public* uses include churches, fraternal halls, schools, municipal buildings, water towers, cemeteries, utility facilities, and the like.


Single Family
Duplex
Multiple Family
Manufactured Home
Public/Semi-Public
Parks
Private Parks
Retail
Commercial
Office
Light Industrial
Vacant
Planning Area
Lowell City Limits
Beaver Lake
BEAVER LAKE
Plate 1-3
City of Lowell, Arkansas
Existing Land Use
Adopted on May 4, 2004
N
1000 0 1000 2000 3000 4000 Feet
Dunkin Sefko & Associates, Inc.
Urban Planning Consultants Dallas, Texas
Date: May 4, 2004

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Office Land Use

This land use type represents any land upon which an office structure is located, whether it is a large office building or a small house that has been converted to an office use; this also includes any related adjacent parking areas and any accessory structures located on the same lot. Examples of *Office* land use include doctors, dentists, real estate, architects, accountants, and secretarial service offices.

Retail Land Use

This land use type represents any land upon which a structure used for retail purposes is located. Examples of *Retail* land use include antique shops, shopping centers, shopping malls, restaurants (sit-down and drive-through), gas stations/convenience stores (without automotive repair service), and the like. The primary difference between *Retail* land use and *Commercial* land use, which is discussed below, is that *Retail* uses generally provide goods and light intensity neighborhood oriented services, and *Commercial* uses generally provide heavier intensity automotive and similar types of services.

Commercial Land Use

This land use type represents any land upon which a structure used for commercial purposes is located. Examples of *Commercial* land use include automobile repair shops, lumberyards, self-storage/mini-warehouses, telecommunications/broadcasting towers, distribution centers, and the like. *Commercial* land uses often have open storage areas.

Industrial Land Use

This land use type represents any land upon which a structure used for industrial purposes is located. Examples of industrial uses include establishments engaged in light processing, product storage and fabrication, product assembly, trucking and transport services, warehousing, and the like.

Vacant or Rights-of-Way

This designation is intended to represent all vacant land parcels that do not have an apparent use or structure on them, as well as land areas that are being used for agricultural purposes. This category also includes land that is predominantly utilized for roadways, railroad lines, and alleys.

Existing Housing Characteristics

Quality of housing and the appreciation of housing values are very important planning considerations. Among the factors influencing the desirability of Lowell as a place to live, and affecting the potential for future development of various portions of the City and its surrounding area, is the condition of existing housing and the quality of the residential neighborhoods they form. The community has an interest in the ability to attract new industry/businesses and new residents, as well as provide adequate habitation choices for its residents.

The quality of housing in Lowell is an important consideration in the evaluation of the adequacy of the existing housing stock, and in estimating future housing requirements. Condition and age are two of the physical characteristics of the housing supply, which reflect the present quality of housing. Tenure, length of residence, persons per household, and affordability are other features that indicate the general status of the housing supply, and are also factors to be considered in the evaluation and analysis of the City's housing requirements. The condition of housing within an area also influences the attractiveness of investment in new or remodeled dwelling units. Normally, residents of a neighborhood area that consists of well maintained, sound housing units with school facilities located a reasonable distance, convenient parks and open space, adequate streets, good sanitation and drainage, and other features that make up a sound neighborhood, will reflect minimum health, economic and social problems. In contrast, a blighted or partially blighted area, where many of the above-listed elements are either nonexistent or poorly provided, will likely present a greater number of problems to the community and the residents.

Analysis of residential neighborhood areas assists in defining any existing problems or deficiencies that are related to the physical features found within the surrounding environment. It further provides a basis for determining proper directive measures required for bringing specific areas into acceptable community standards. For sound neighborhood areas it is appropriate to establish the goals or standards that will emphasize continuation of existing characteristics contributing to the present desirable physical condition. The following sections outline the various characteristics of Lowell's housing supply.

Density and Number of Housing Units

The total number of households for the year 2000 increased substantially from 1990 to the year 2000, as **Table 1-13** shows. The city grew by a total of 1,447 households over a 10-year time span. It is notable that the number of people living in a given household increased from 2.57 to 2.62 persons per household by the year 2000. This could indicate that the City had a significant influx of families with children over that ten-year time frame. It is interesting to note, by contrast, that the average household size for the State of Arkansas was 2.49 persons per household in 2000, and the average household size in Benton County in 2000 was 2.60 persons per household.

Table 1- 13
Total Number of Households
City of Lowell, Arkansas

Year	Persons per household	Number of households*	Household unit change
1990	2.57	467	NA
2000	2.62	1,914	1,447

Source: U.S. Census
* Number of occupied housing units

Table 1-14 shows the existing number of dwelling units for the City of Lowell. Lowell's housing stock is mostly comprised of single-family detached residences (68.4%). The city's second largest housing type is multi-family units (3 or more units; 22.1% of the housing stock). Other substantial categories are mobile homes and duplexes (2 units) with 4.7% and 3.5% of the total housing types, respectively.

Table 1- 14
Housing Type -- 2000
City of Lowell, Arkansas

Housing Type	Lowell		State of Arkansas	
	Number	Percent	Number	Percent
1-unit, detached	1,360	68.4%	809,373	69.0%
1-unit, attached	29	1.5%	20,908	1.8%
2 units	68	3.4%	37,702	3.2%
3 or 4 units	69	3.5%	35,068	3.0%
5 to 9 units	122	6.1%	31,193	2.7%
10-19 units	230	11.6%	26,935	2.3%
20 or more units	18	0.9%	32,535	2.8%
Mobile home	93	4.7%	174,831	14.9%
Boat, RV, van, Etc.	----------	0.0%	4,498	0.4%
Total	1,989	100.0%	1,173,043	100.0%

Source: U.S. Census

Age of the Local Housing Supply

Structural age is a significant factor in determining the desirability of a home, and on a citywide basis it can be an indicator of the overall general condition of a community's housing stock. **Table 1-15** reveals that the vast majority (79.6%) of the homes in the City were built after 1990. Most recently, 13.9% of the homes within the City were built between 1999 and March 2000, according to 2000 Census figures. In general, and except for the oldest residential neighborhoods near the downtown area, the condition of most homes within Lowell is good with most of them needing only minor repairs and/or maintenance. The fact that most of the City's homes are in good condition implies that there is a good deal of personal pride in ownership and home appearance among residents living within the City.

Table 1- 15
Year of Construction for Housing Structures -- 2000
The City of Lowell and The State of Arkansas

	Lowell		State of Arkansas	
Year of Construction	**Number**	**Percent**	**Number**	**Percent**
Before 1939	47	2.4%	82,464	7.0%
1940 to 1959	15	0.8%	185,070	15.8%
1960 to 1969	45	2.3%	169,228	14.4%
1970 to 1979	136	6.8%	265,647	22.6%
1980 to 1989	162	8.1%	211,664	18.0%
1990 to 1994	306	15.4%	105,115	9.0%
1995 to 1998	1,001	50.3%	118,105	10.1%
1999 to March 2000	277	13.9%	35,750	3.0%
Total	**1,989**	**100.0%**	**1,173,043**	**100.0%**

Source: U.S. Census

Table 1-16 shows information regarding how many building permits the City issued for single-family and two-family dwelling units. This information covers the last sixteen years, from 1987 through 2002. The fewest single-family permits were issued during 1988 at 10, and the most were issued in the year 2001 at 220. For two-family units, none were issued during several years, and 26 were issued in 1992, which is the largest number issued in any single year over the past sixteen years.

The total number of single-family permits issued was 1,572 between 1987 and through 2002, and the total number of two-family permits was 86. The average number of single- and two-family permits from 1995 through 2002, which represent more recent years' growth rates, was about 158 permits issued per year over that 8-year time period. This number will be important to consider when establishing the projected growth rate for Lowell within the *Future Land Use Plan*.

Table 1-16
Number of Residential Building Permits
City of Lowell, Arkansas

Year	Single-Family	Two-Family	Average Between 1995 and 2002
1987	11	0	
1988	10	0	
1989	12	4	
1990	30	4	
1991	30	4	
1992	43	26	
1993	83	22	
1994	92	12	
1995	133	0	158
1996	148	2	
1997	193	0	
1998	170	0	
1999	149	4	
2000	118	0	
2001	220	0	
2002	130	8	
Total	**1,572**	**86**	

Source: City of Lowell

Tenure (Residency)

Tenure is defined as the length of time people tend to reside in a community. It is assumed that people who live in an area for long periods of time take better care of the housing structures than people who tend to live in the area for a short amount of time.

Table 1-17 illustrates 1990 and 2000 numbers for several cities in regards to renter- versus owner-occupied housing units. For the year 2000, the City of Lowell was approximately the same as the State's average for renter- versus owner-occupied rates (approximately 69% owner-occupied). The City has seen a slight increase of roughly three percentage points in the number of renter-occupied housing units from 1990 to 2000, indicating that a few more units are being rented out rather than the owner living there.

Table 1- 17
Renter- Versus Owner-Occupied Units 1990-2000
City of Lowell, Surrounding Communities, and the State of Arkansas

City/State	1990		2000	
	Owner- Occupied Percentage	Renter- Occupied Percentage	Owner- Occupied Percentage	Renter- Occupied Percentage
Arkansas	69.6%	30.4%	69.4%	30.6%
Bella Vista	82.5%	17.5%	87.7%	12.3%
Bentonville	67.0%	33.0%	62.5%	37.5%
Cave Springs	67.8%	32.2%	82.4%	17.6%
Decatur	72.5%	27.5%	54.6%	45.4%
Elm Springs	84.5%	15.5%	74.8%	25.2%
Gentry	62.3%	37.7%	59.3%	40.7%
Gravette	64.6%	35.4%	60.4%	39.6%
Little Flock	81.5%	18.5%	39.9%	60.1%
Lowell	**71.9%**	**28.1%**	**69.0%**	**31.0%**
Rogers	63.8%	36.2%	63.2%	36.8%
Siloam Springs	58.7%	41.3%	57.1%	42.9%
Springdale	63.9%	36.1%	60.4%	39.6%
Sulphur Springs	67.3%	32.7%	69.4%	30.6%

Source: U.S. Census

Housing Value and Rental Rates

Housing and rental rates can often determine families' ability to obtain shelter. The usual financial guide is that families typically spend around 30% of their household income on housing. **Table 1-18** shows housing value of owner-occupied housing units for the year 2000. Most of Lowell's homes are valued between $50,000 to $149,999, whereas most of the homes in the overall State are valued at less than $99,999.

Table 1-18
Housing Value of Owner-Occupied Housing Units -- 2000
City of Lowell and The State of Arkansas

Housing Value	Lowell		State of Arkansas	
	Number	Percent	Number	Percent
Less than $50,000	6	0.6%	140,655	27.4%
$50,000 to $99,999	693	63.8%	230,751	44.9%
$100,000 to $149,999	282	26.0%	81,850	15.9%
$150,000 to $199,999	50	4.6%	31,081	6.1%
$200,000 to $299,999	26	2.4%	19,075	3.7%
$300,000 to $499,999	29	2.7%	7,608	1.5%
$500,000 to $ 999,999	---	0.0%	1,880	0.4%
$1,000,000 or more	---	0.0%	583	0.1%
Total*	**1,086**	**100.0%**	**513,483**	**100.0%**
Median Value	**$90,900**		**$72,800**	

Source: U.S. Census
* Specified owner-occupied units

Table 1-19 gives the monthly gross rental rates for the City. The City's median rent rate for 2000 was $582 per month, which means that half the rental rates are above this number and half are below. If $582 is the amount required to obtain adequate shelter, and if a family spends 30% of their household income for housing, then an annual income of $23,280 would be required to occupy a rental unit having the median rental rate of $582 per month. The value of $23,280 is substantially below the City's median household income of $48,063 (from **Table 1-9**). This would tend to indicate that there is probably already a reasonable inventory of affordable housing in the City.

Table 1-19
Gross Rent
City of Lowell, Arkansas

Gross Rent Per Month	1990		2000	
	Number	Percent	Number	Percent
Less than $200	8	6.2%	---	0.0%
$200 to $299	27	20.8%	18	3.1%
$300 to $499	66	50.8%	100	16.9%
$500 to $749	7	5.4%	371	62.9%
$750 to $999	2	1.5%	72	12.2%
$1,000 to $1,499	---	0.0%	19	3.2%
$1,500 or more	N/A(1)	---	---	0.0%
No cash rent	20	15.4%	10	1.7%
Total	**130**	**100.0%**	**590**	**100.0%**
Median Gross Rent	**$342**		**$582**	

Source: U.S. Census

(1) 1990 Census combined the categories "$1,000 to $1,499" and "$1,500 or more" to form a category "$1,000 or more"

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City of Lowell

COMPREHENSIVE PLAN 2025

Chapter 2: Goals & Objectives

Introduction

The City of Lowell has taken an important step in guiding its future with the decision to undertake this comprehensive planning process. The purpose of the *Goals & Objectives* chapter of the Comprehensive Plan is to state clear goals for the City, and to identify clear directions that should be taken to achieve such goals. It is the goals and objectives established herein that will determine the focus of the Comprehensive Plan recommendations contained within subsequent chapters. In essence, Lowell's Comprehensive Plan should reflect "public decision-making, which emphasizes explicit goal-choice and rational goals-means determination, so that decisions can be based on the goals people are seeking and on the most effective programs to achieve them."[1]

A Vision for the Future

Identifying a mission statement and establishing a community vision are important parts of the process of identifying goals and objectives. Both of these are set forth in the Comprehensive Plan as "guiding statements" of what type of community Lowell's policy-makers foresee in the City's future, and they are as follows:

Mission Statement:
The City of Lowell should position itself to meet the current and future needs of its residents and businesses.

Vision Statement:
The City of Lowell should be a community that is safe, friendly, and family-oriented where residents enjoy affordable and high quality homes, quiet and safe neighborhoods, and a positive community spirit; the City should attract and promote thriving businesses which provide goods and services for our community and for the surrounding area.

[2-1] People and Plans: Essays on Urban Problems and Solutions, Herbert J. Gans, Preface, pg. vii

Issues Identified

Early in the comprehensive planning process, Steering Committee members were asked to identify major issues that they thought Lowell was currently facing or would face in the future. The discussion clearly indicated members' views concerning quality of life issues in the City of Lowell, the City's strengths and weaknesses related to development, as well as other vital characteristics that will help to provide a basis for the goals and objectives. The issues outlined in the following list were determined to be of primary importance to the future of the City by the Comprehensive Plan Steering Committee. It should be noted that the list is not in any order of priority.

- Park and Recreational Needs
  - Increased recreation opportunities for youth
    - Multi-function sports complex
    - Jogging/bicycling trails and routes around the City
  - More large green open spaces dispersed throughout the City

- Community & Environmental Issues
  - Need to improve public perception of the community
  - Adequacy of public safety services
  - Preservation of existing trees
  - Schools
  - Need to take better advantage of location between Springdale and Rogers/Bentonville
  - Maintenance and improvement of quality of life (especially safeness of the community)
  - Code enforcement
  - Stability and enhancement of property values
  - Need to create a special place downtown, a "hearbeat" place for the community

- Infrastructure Issues
  - Water, and the need to be less dependent on others
  - Wastewater, and the need to be less dependent on others
  - Infrastructure capacity
  - Storm drainage

- Thoroughfare Issues
  - Increasing traffic (especially on State Highway 264/Monroe, State Highway 71Business/North Bloomington, McClure Road, and Old Wire Road)
  - Need higher standards for roadway construction
  - Challenges related to the railroad (access across it, noise impacts, etc.)
  - Need for shared drives, cross-circulation within new developments along major roadways and highways

- Housing Issues
  - Strategies related to increased square footages, lot sizes
  - Multiple-family development, and a concern regarding how much is enough to accommodate market demands
  - Need for more upscale housing (the City already has a fair share of affordable housing)
  - Alternative housing types (such as gated and zero-lot-line homes) that are more suitable for "empty nesters" and elderly population
  - Need for high standards for new housing (all types)
  - Deterioration of older neighborhoods - proactive implementation

- Issues Related to Future Development
  - Annexation issues related to pressure by surrounding communities (Act 779)
  - Business along major thoroughfares (types, appearance, etc.)
  - Upgrade building construction, landscaping, and other site design standards
  - Lack of zoning consistency (too piecemeal)
  - Need for specific land uses:
    - Hotels/motels
    - More retail establishments, such as major retail stores and "real restaurants" (i.e., not fast food)
    - Medical center or at least an urgent-care clinic
    - Additional nonresidential, especially along the highway and Business 71
    - Reduce, or mitigate, the amount of trucking-related businesses (and upgrade roads to better handle heavy truck traffic)

Definitions

In a broad sense:

> **Goals** are *general statements* concerning an aspect of the City's desired ultimate physical, social and/or economic environment. Goals set the tone for development decisions in terms of the citizens' desired quality of life.
>
> **Objectives** express the kinds of *action* that are necessary to achieve the stated goals without assigning responsibility to any specific action.

The policies and recommendations related to these goals and objectives will be contained within subsequent chapters of this Plan, and they will help to clarify the *specific position* of the City regarding a specific objective, and will encourage *specific courses of action* for the community to undertake to achieve the applicable stated objective.

The goals and objectives established herein relate to Chapter Three through Chapter Nine, which are the Plan recommendation chapters, of Lowell's Comprehensive Plan.

Goals & Objectives Related to Thoroughfares

GOAL 1:

Provide an efficient, safe and connective transportation system that is coordinated with existing needs and with plans for future growth; this system should be economical, and it should be responsive to the transportation demands and impacts of adjacent land uses.

Objective 1.1:

Use the *Master Street Plan* in conjunction with the *Future Land Use Plan*, specifically to ensure that the various land uses within the City are accommodated by the transportation system.

Objective 1.2:

Work closely with regional transportation planning groups and neighboring municipalities to ensure that regional transportation issues, especially those that directly affect Lowell (e.g., frontage roads and intercity roadways), are addressed with City input.

Objective 1.3:

Ensure that the following concerns are addressed when making decisions regarding transportation within the City:

- Regional transportation,
- Roadway integrity (i.e., ensuring mobility/efficiency as well as traffic safety),
- Roadway maintenance,
- Adequate access (to and from Lowell, and to and from destinations and residential neighborhoods within Lowell),
- Connections between existing roadways,
- Future median openings (and cross-traffic) on major roadways,
- Neighborhood traffic concerns,
- Signalization, and
- Impact of various types of land uses (i.e., trip generation and parking needs).

Objective 1.4:

Identify any existing transportation deficiencies, and establish ways in which to improve such deficiencies, if possible; concentrate such efforts toward arterial roadways that funnel traffic to and from Interstate Highway 540 and State Highway 71 Business.

Objective 1.5:

Utilize the *Master Street Plan* to identify rights-of-way locations (for dedication purposes) and criterion such that future growth can be accommodated; ensure that criterion are integrated into the City's Subdivision Ordinance.

Objective 1.6:
Investigate ways in which the development community is involved in protecting the integrity of roadways in Lowell (i.e., by requiring traffic impact analyses, infrastructure construction, and improvements prior to final development approval, or establishing a transportation/roadway impact fee if authorized by State statute).

Objective 1.7:
Ensure that a positive image of Lowell is reflected within major transportation corridors (e.g., Interstate Highway 540 and State Highway 71 Business). {Related objectives are under the *Future Land Use* subject heading.}

Objective 1.8:
Ensure that local roadways, such as Monroe Avenue, can accommodate increases in traffic, and that local intersections, such as Monroe Avenue and State Highway 71 Business, are adequate.

Objective 1.9:
Utilize the *Master Street Plan* to establish standards for shared drives, for circulation within new developments, and for protecting the integrity of major roadways; ensure that such standards are integrated into the City's Subdivision Ordinance.

Objective 1.10:
Investigate the feasibility of extending East Monroe Avenue east to Old Wire Road (via Nail Avenue), and creating a new arterial between North Dixieland Street and Beaver Lake (north of Robinson Avenue), to provide two more crucial east/west linkages across the community.

Objective 1.11:
Investigate the feasibility of re-routing Primrose Road around the eastern perimeter of the Beaver Water District campus in order to minimize public intrusion and access into the Water District's campus.

Objective 1.12:
Investigate the feasibility of upgrading portions of Goad Springs Road to a minor arterial in order to better accommodate increased traffic west of Interstate Highway 540.

Goals & Objectives Related to Housing

GOAL 2:

Provide for housing diversity and choices throughout the City.

Objective 2.1:
Establish strategies for encouraging increased square footages and lot sizes to encourage low-density residential development.

Objective 2.2:
Ensure that the City's Zoning Ordinance provides for an adequate range of square footages and lot sizes for new development.

Objective 2.3:
Review the City's policies and regulations related to two-family and multiple-family housing, including zoning regulations, market need, potential effects on land use compatibility, traffic generation, and aesthetics.

Objective 2.4:
Ensure that there is adequate variety in terms of housing types within the City that will meet the diverse lifestyle and affordable housing needs of all income and age levels.

Objective 2.5:
Establish areas within the City that may be appropriate for gated communities and/or communities with zero-lot line residences in order to meet the needs of the local "empty-nesters" and elderly populations.

GOAL 3:

Protect the integrity of existing and future neighborhoods by ensuring that existing neighborhoods are maintained to a high standard, and by ensuring that new neighborhoods in the vicinity are developed to a high standard.

Objective 3.1:
Recognize the importance of existing older neighborhoods to the character of Lowell by implementing policies, such as proactive code enforcement, that will support their long-term viability, marketability, valuation and attractiveness.

Objective 3.2:
Ensure that new residential areas are developed to a high standard by reviewing, and revising if necessary, the existing standards for residential development.

Goals & Objectives Related to Parks & Recreation

GOAL 4:
Provide more parks, open spaces, and recreation opportunities for the population in Lowell.

Objective 4.1:
Recognize the importance of providing activities and facilities that will meet the needs of local growing and active people, and establish ways in which the City can participate jointly with other entities (such as the School District) in the provision of recreational activities and the construction of recreational facilities.

Objective 4.2:
Investigate the economic and market feasibility of constructing a community-serving multi-function sports complex; such a complex should be capable of securing regional participation in related sports activities; establish a potential location for this sports complex within the *Parks & Open Space Plan* chapter of the Comprehensive Plan.

Objective 4.3:
Create a comprehensive system of hike/bike trails using flood plains and other green spaces where possible, and using on-street or adjacent-to-the-street designated routes where necessary, such that important destinations within the entire City are accessible to bicyclists and recreational pedestrians.

Objective 4.4:
Require dedication of neighborhood park land (or fees in lieu of land, if in the better interest of the City) with all new residential subdivisions in order to acquire neighborhood-serving park sites as well as greenbelt areas and hike/bike easements, as necessary, for the City-wide trail system. Add these provisions into the City's Subdivision Ordinance.

Goals & Objectives Related to Community Facilities & Services

GOAL 5:

Ensure that public services and facilities will adequately serve the needs of residents and businesses within the City of Lowell, and that such services and facilities are adaptable to future growth.

Objective 5.1:

Maintain a continuous and coordinated planning process that involves citizens, City boards/commissions, City staff, and the Rogers Independent School District.

Objective 5.2:

Recognize that the quality of the local school district is related to economic development opportunities and the ability of the City to provide a positive employment base for its citizenry on an on-going basis; foster a relationship and coordinate applicable City activities with the Rogers Independent School District.

GOAL 6:

Foster a positive interactive relationship with the public, and encourage citizen involvement and civic pride.

Objective 6.1:

Ensure that the public is made aware of opportunities for involvement in local City activities, such as serving on various City boards and committees.

Objective 6.2:

Investigate proactive ways in which the City can secure more community involvement and input.

Objective 6.3:

Make doing business with the City more user-friendly by offering services, such as paying for water bills, over the Internet.

Objective 6.4:

Increase code enforcement efforts in order to compel City residents to take better care of their property, and to result in a cleaner, safer and more beautiful City for all to enjoy.

GOAL 7:

Ensure that local residents and businesses feel safe from crime and injury.

Objective 7.1:

Ensure that there is sufficient police and fire protection for current and future residents, and ensure that the City remains aware of necessary increases in staff and/or related resources (e.g., police cars, fire engines, etc.) to enable such protection for future residents.

Objective 7.2:

Define standards for adequate response/service levels for public services and facilities, such as the following:

1. Municipal government;
2. Police and fire protection;
3. Recreational opportunities;
4. Utilities/infrastructure and solid waste management.

Objective 7.3:

Investigate the feasibility of providing ambulance and EMS services to residents (rather than continuing to rely upon others for these services).

Goals & Objectives Related to Future Land Use

GOAL 8:

Encourage the most desirable and efficient use of land while enhancing the physical and economic environment of Lowell.

Objective 8.1:

Ensure that local land use policies encourage appropriate areas for the development of nonresidential uses, such as along Interstate Highway 540 and State Highway 71 Business.

Objective 8.2:

Establish design standards related to the development of nonresidential uses in order to ensure a positive visual perception of Lowell along major thoroughfares.

Objective 8.3:

Establish land use policies, possibly within the Zoning Ordinance, to encourage the area along Interstate Highway 540 to become a high quality retail corridor that would enhance Lowell, both economically and visually.

Objective 8.4:
Establish land use policies to encourage new commercial and industrial development within existing commercial and industrial areas, and to encourage new retail uses to locate along the highway in Lowell.

Objective 8.5:
Ensure that Lowell's land use policies encourage a balance of land uses such that there are adequate areas for nonresidential uses that will provide the essential tax base needed for the City to support existing and future residents.

Objective 8.6:
Ensure that the regulatory policies within the City's Zoning Ordinance and related map are consistent with current City needs and desires; establish ways in which the Ordinance can be regularly reviewed.

Objective 8.7:
Identify specific land uses that are needed to serve the citizens of and visitors to Lowell, such as healthcare-related land uses, hotels, recreation, and retail; establish ways in which the City can proactively attract these identified land uses.

Objective 8.8:
Continue the City's current level of proactive code enforcement.

GOAL 9:

Maintain and enhance the City's local character and aesthetic value through proactive land use planning.

Objective 9.1:
Review, and if necessary revise, the City's Zoning Ordinance to ensure that high standards are required for new nonresidential developments.

Objective 9.2:
Ensure that new nonresidential development enhances the quality of life, the tax base, and the job inventory in Lowell.

Objective 9.3:
Ensure that new development, both residential and nonresidential, will be compatible with existing land uses in terms of use, density, building heights, scale, and offsite effects.

GOAL 10:

Enhance and expand the local economy by attracting and maintaining businesses in Lowell.

Objective 10.1:
Review current policies related to economic development, such as tax abatement, and revise such policies if necessary.

Objective 10.2:
Work with the Rogers-Lowell Area Chamber of Commerce to establish a listing of target industries, industries that the City should actively pursue to locate in Lowell.

Objective 10.3:
Establish specific ways in which to actively market Lowell as a premier location for target industries, and create a general marketing theme for Lowell that emphasizes positive local characteristics such as quality of life, quality labor force, competitive land prices and supportive City government.

Objective 10.4:
Research and investigate the ability of Lowell to compete with surrounding communities for new business development and business retention; identify ways in which Lowell can be increasingly competitive.

GOAL 11:

Ensure that Lowell projects a positive visual image that makes the City attractive to quality businesses.

Objective 11.1:
Ensure that the City's land use policies and Zoning Ordinance provisions include requirements for high quality new nonresidential development; ensure that land use policies are consistent with economic development objectives.

City of Lowell

COMPREHENSIVE PLAN 2025

Chapter 3: The Future Land Use Plan

Introduction

The *Future Land Use Plan* designates various areas within the City for particular land uses, based principally upon population growth, locational criteria, compatibility criteria, and a balance of land use types. The *Future Land Use Plan* establishes an overall framework for the preferred pattern of development within the City of Lowell. Graphically depicted for use during the development plan review process (**Plate 3-1**), the *Future Land Use Plan* should ultimately be reflected through the City's policy and development decisions. ***The Future Land Use Plan map is not a zoning map, which deals with specific development requirements on individual parcels; changes to the zoning map should, however, be based on the Future Land Use Plan.***

Projected Future Population

Increased demand for all types of land uses must be taken into account when establishing a *Future Land Use Plan*. Such increased demand is inevitable with population growth. The population projections contained herein form the foundation of establishing how much land should be allocated to particular types of land use. Analyzing past growth trends within the City, as well as the growth trends of surrounding communities and the County, helps to predict what Lowell can expect in terms of future population growth. The following is a discussion of the way in which the population projections for Lowell have been established.

As discussed in the *Baseline Analysis*, Lowell experienced rapid growth between 1960 and 1970, and again between 1990 and 2000. The growth rate experienced by Lowell between 1970 and 2000, which was a compounded rate of 7.03%, was significantly higher than that of any other surrounding city and even that of Benton County (see **Table 3-1**); this may have been partially attributable to the good economy enjoyed by Lowell and the overall region, but it must also be indicative of how desirable Lowell is to prospective residents. It should be noted, however, that the average

Table 3-1
POPULATION GROWTH OF LOWELL & SURROUNDING COMMUNITIES
1970-2000

City	1970	1980	1990	2000	Growth Percentage	Average Annual Compounded Growth Percentage
Lowell	**653**	**1,078**	**1,224**	**5,013**	**667.7%**	**7.03%**
Bentonville	5,508	8,756	11,257	19,730	258.2%	4.35%
Rogers	11,050	17,429	24,692	38,829	251.4%	4.28%
Cave Springs	469	429	465	1,103	135.2%	2.89%
Springdale	16,783	23,458	29,941	45,798	172.9%	3.40%
Benton County	50,476	78,115	97,499	153,406	203.9%	3.78%

Source: U.S. Census
NOTE: Data from this table is also contained within the *Baseline Analysis*, Tables 1-3 and 1-4.

compounded growth rate for the County between 1970 and 2000 was approximately 3.78%, which may be more reflective of the steady growth rate that the overall region can anticipate in the future. It is reasonable to assume, however, that since Lowell seems to have been capturing a higher percentage of the overall County's growth over the last few decades, it may continue to do so in the foreseeable future. This means that using a higher compounded growth rate for the purpose of projecting future population for Lowell, such as 5.5% or even 7.0%, may be justifiable since recent trends indicate that Lowell has been capturing a high proportionate share of the County's growth. Bentonville and Rogers were the second and third fastest growing cities in the area, respectively, at approximately 4.3% of the County's growth.

Another factor to consider in establishing population projections is the number of residential building permits issued in Lowell in recent years. As discussed in the *Baseline Analysis* (refer to **Table 1-16** and the related discussion), the number of building permits for single-family units issued between 1987 and 2002 was 1,572 units, and the number of building permits for two-family units was 86 units during the same time period. Together, the total number of residential building permits (excluding multi-family) was 1,658, and the average number of building permits issued per year during that time period was 104 units per year. However, the average number of permits issued from 1995 through 2002 (158 units) seem to be more representative of the City's growth trends over the past few years, and in light of the fact that Lowell is becoming an increasingly desirable city in which to live, this average number of permits seems to be a more contemporary, reasonable and attainable number for planning purposes.

Taking all of these factors into account, population projections for Lowell were calculated and are shown in **Table 3-2**. Scenario A reflects a rate that would result using close to the average number of residential building permits that Lowell has issued each year since 1987 (100 units), and it would calculates into an approximate compounded growth rate of 4.0%. Scenario B is reflective of a future growth trend that correlates more closely with the average number of residential building permits issued during Lowell's more recent growth years (between 1995 and 2002), which was 158 permits. When this number is rounded up to 160 permits per year, this calculates into a compounded growth rate of approximately 5.5%. Scenario C is based not on the number of building permits historically issued per year in Lowell, but on the actual average compounded growth rate of the City's population between 1970 and 2000 of approximately 7.03%.

Of the three scenarios presented, Scenario B's annual compounded growth rate of 5.5% was deemed to be the most logical and most realistic. Therefore, this growth rate is used within this Comprehensive Plan document to project the future population of Lowell out to the year 2025, and it should be used by the City in the future for planning purposes until a different trends analysis is performed that yields a different figure. This would mean that Lowell can expect to have a population of approximately 18,900 people in the year 2025, which is representative of the population number that the City should plan to be able to accommodate in terms of infrastructure, parks, public facilities, and other related necessities that may be provided by the local government in Lowell. The City should continually assess how many building permits have been issued each year in order to track whether this population projection scenario is continuously accurate and helpful for planning purposes in coming years.

Table 3-2
POPULATION PROJECTIONS
City of Lowell, Arkansas

Year	SCENARIO A 4.0% Growth Rate	SCENARIO B 5.5% Growth Rate	SCENARIO C 7.0% Growth Rate
1980	1,078	**1,078**	1,078
1990	1,224	**1,224**	1,224
2000(1)	5,013	**5,013**	5,013
2005	6,100	**6,500**	7,000
2010	7,400	**8,500**	9,800
2015	9,000	**11,100**	13,700
2020	11,000	**14,500**	19,200
2025	13,400	**18,900**	26,900
Residential Building Permits Per Year(2)	100	**160**	265

(1) Growth rate between 1980 and 2000: 7.99%

(2) Based on U.S. Census 2000 data: 3.0 persons per household, 90.6% occupancy rate (both for Benton County)

Source: 1980, 1990 & 2000 populations from the U.S. Census; population projections from Dunkin, Sefko & Associates, Inc.

Lower and higher annual compounded growth rates are included as Scenario A and Scenario C, respectively. The population growth of Scenario A and that of Scenario C are based on population growth factors that have previously occurred in Lowell, and they are therefore valid to consider. If in future years, Lowell is not growing in population in a way that is consistent with Scenario B, these other scenarios may be helpful to the City in updating its population projections. It should be noted that the 2025 population under Scenario C is only slightly less than Lowell's ultimate population capacity, as discussed below.

Territorial Jurisdiction (Planning Area)

The City of Lowell has a significant amount of territorial jurisdiction (i.e., extended planning area) to the east, but very little planning area to the north, west and south due to the territorial jurisdictions of adjacent communities (i.e., Rogers, Cave Springs, Springdale and Bethel Heights). The City recently annexed an extensive amount of land area to the west in order to protect it from encroachment and annexation by neighboring communities under the provisions of Act 779. The City's western boundary, as a result, is now established as far west as the City can, and probably wants to, grow toward Cave Springs.

The City's current corporate limits, except for one area in the vicinity of Nail Avenue, do not extend eastward beyond Old Wire Road. However, the City's planning area extends east all the way to Beaver Lake (see **Plate 3-1**, *Future Land Use Plan*, which reflects the City's currently adopted "Territorial Jurisdiction and Planning Area Map", as adopted on _____, 2004). The eastern half of this future growth area is characterized by hilly terrain and many natural drainageways and creeks, and it is still heavily forested in many areas. These attributes of the land make this area very challenging to develop, but they also make the area ideally suited to very low density, preferably upscale, residential neighborhoods with a uniquely northwestern Arkansas natural setting.

A Balanced & Compatible Future Land Use Pattern

The various types of land use have different needs in terms of location. For example, heavy vehicular traffic should be able to circumvent residential areas, thereby preserving the integrity of local neighborhoods and ensuring the safety of local residents. In contrast, nonresidential uses should generally be located along major thoroughfares in order to allow them the highest visibility possible. The exception to this may be heavy commercial and industrial uses, which often have open storage areas and large warehouses that may not make a positive contribution to the way in which Lowell would be viewed from Interstate Highway 540 or State Highway 71 Business.

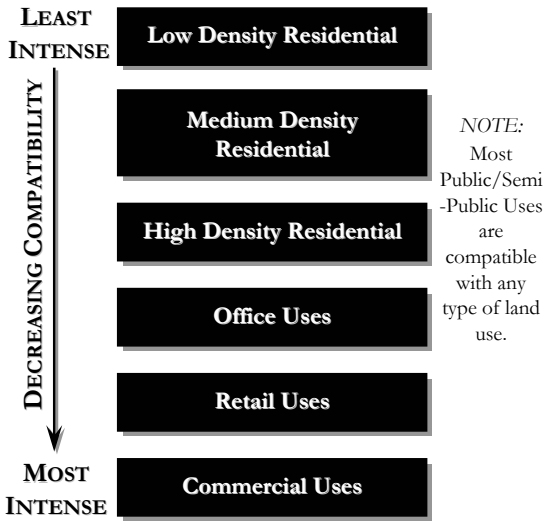
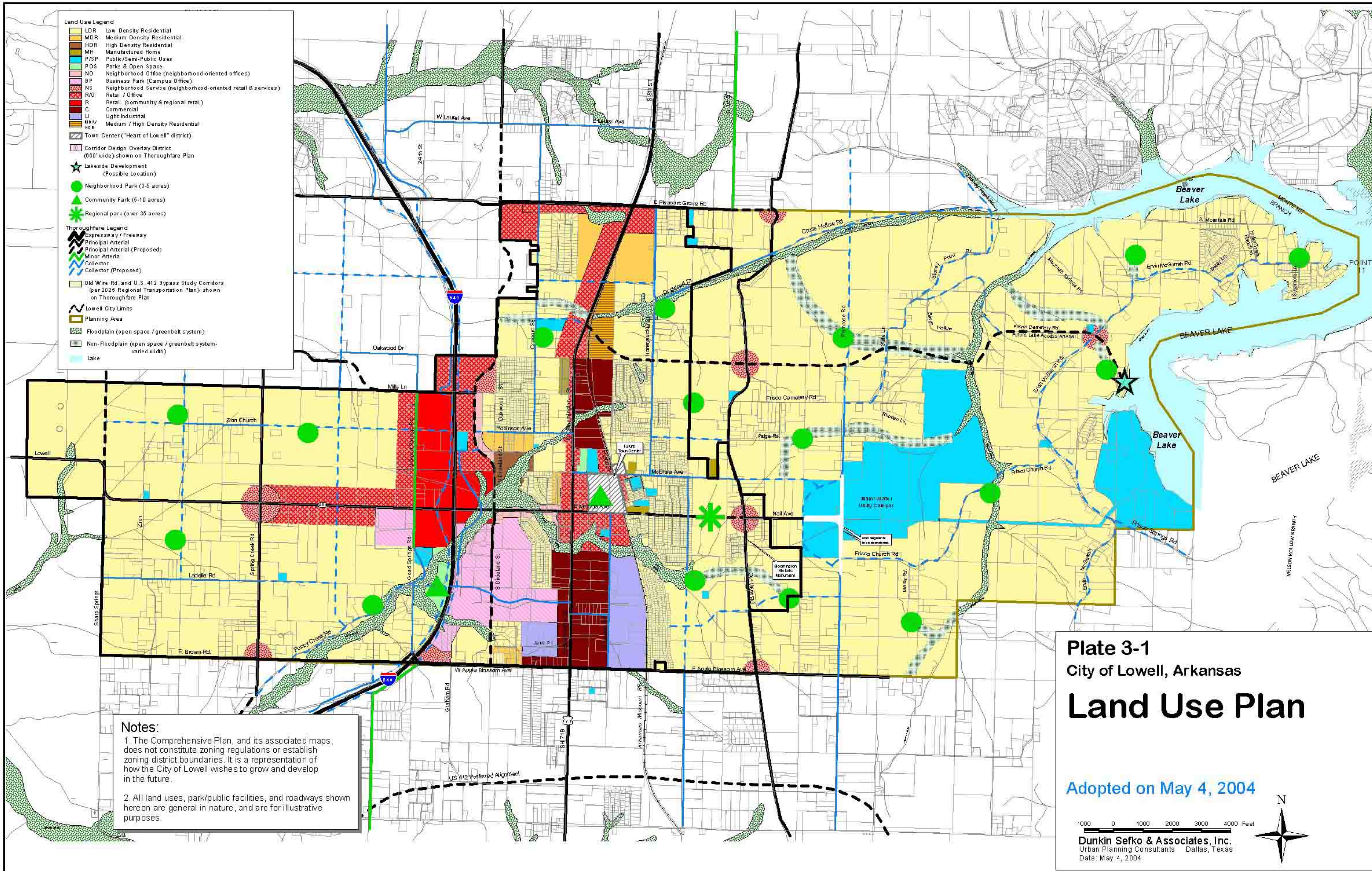


Illustration 3-1
COMPATIBILITY COMPARISON OF VARIOUS TYPES OF LAND USE

Retail and some commercial land uses require locations that provide visibility, because these types of land use often depend upon "walk-in business" for success. Consequently, existing vacant land areas along Interstate Highway 540, State Highway 71 Business, State Highway 264 and East Pleasant Grove Road have been designated for (and should be preserved for) retail, office and limited low-impact commercial land uses. The land uses within these corridors should be those that are designed such that they are aesthetically pleasing – in contrast to most heavy commercial and industrial uses.

The market, in conjunction with City policy, has dictated the existing land use pattern (shown on **Plate 1-3** in the *Baseline Analysis*) in Lowell over the years, a pattern that generally supports these concepts of residential and nonresidential locations in most locations. The *Future Land Use Plan*, graphically shown on **Plate 3-1**, further reinforces these concepts. It should be noted that nonresidential development will become increasingly important as the City continues to grow in population, and desirable businesses need to be identified and targeted for these areas for continued economic development and growth to serve the population's growing needs.

By taking into account the Comprehensive Plan goals for balanced development and better traffic circulation within Lowell, the *Future Land Use Plan* guides the allocation of land uses in a pattern that is intended to yield greater opportunity for compatibility between differing land uses. As **Illustration 3-1** shows, the more intense the type of nonresidential land use is, the less compatible that land use is with residential uses. In general, office uses and small, neighborhood-oriented retail establishments adjacent to residential uses create positive relationships in terms of land use compatibility; since these are considered lower intensity land uses. There are many techniques, including setback standards, buffering, screening and landscaping, that can be implemented through


Land Use Legend
LDR Low Density Residential
MDR Medium Density Residential
HDR High Density Residential
MH Manufactured Home
P/SP Public/Semi-Public Uses
POS Parks & Open Space
NO Neighborhood Office (neighborhood-oriented offices)
BP Business Park (Campus Office)
NS Neighborhood Service (neighborhood-oriented retail & services)
R/O Retail / Office
R Retail (community & regional retail)
C Commercial
LI Light Industrial
MDR/HDR Medium / High Density Residential
Town Center ("Heart of Lowell" district)
Corridor Design Overlay District (660' wide) shown on Thoroughfare Plan
Lakeside Development (Possible Location)
Neighborhood Park (3-5 acres)
Community Park (5-10 acres)
Regional park (over 35 acres)
Thoroughfare Legend
Expressway / Freeway
Principal Arterial
Principal Arterial (Proposed)
Minor Arterial
Collector
Collector (Proposed)
Old Wire Rd. and U.S. 412 Bypass Study Corridors (per 2025 Regional Transportation Plan) shown on Thoroughfare Plan
Lowell City Limits
Planning Area
Floodplain (open space / greenbelt system)
Non-Floodplain (open space / greenbelt system- varied width)
Lake
W Laurel Ave
E Laurel Ave
24th St
S 8th ST
E Pleasant Grove Rd
Cross Hollow Rd
Dogwood Dr
Stoney Point Rd
Primrose Rd
Gate Ln
Silver Hollow
Honeysuckle St
Concord St
Oakwood Dr
Mills Ln
Oakwood St
Robinson Ave
Frisco Cemetery Rd
Rhoden Ln.
Paige Rd
Future Town Center
McClure Ave
Zion Church
Lowell
Zion
Spring Creek Rd
Ladelle Rd.
Sharp Springs
E. Brown Rd.
Puppy Creek Rd
Goad Springs Rd
S Dixieland St
Jane Pl
Nail Ave
Major Water / Utility Campus
road segments to be abandoned
Frisco Church Rd
Bloomington Historic Monument
Old Wire Rd
Mallis Rd.
W Apple Blossom Ave
E Apple Blossom Ave
Graham Rd
SH 71B
Arkansas Missouri RR
US 412 Preferred Alignment
Beaver Lake
MONTE NE BRANCH
S Mountain Rd
Ervin McGarrah Rd.
Mountain Springs Rd
Sycamore Ln
POINT 11
BEAVER LAKE
Frisco Cemetery Rd. Future Lake Access Arterial
Frisco Springs Rd
Ervin McGarrah
NELSON HOLLOW BRANCH
Notes:
1. The Comprehensive Plan, and its associated maps, does not constitute zoning regulations or establish zoning district boundaries. It is a representation of how the City of Lowell wishes to grow and develop in the future.
2. All land uses, park/public facilities, and roadways shown hereon are general in nature, and are for illustrative purposes.
Plate 3-1
City of Lowell, Arkansas
Land Use Plan
Adopted on May 4, 2004
N
1000 0 1000 2000 3000 4000 Feet
Dunkin Sefko & Associates, Inc.
Urban Planning Consultants Dallas, Texas
Date: May 4, 2004

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zoning and development regulations that would help increase compatibility between these different land uses (see the *Neighborhood & Business Enhancement Plan* chapter of the Comprehensive Plan). In keeping with established land use and development-related goals and objectives (Chapter 2), Lowell should review such regulations to ensure that they are required to provide proper buffering, screening, and site design techniques to mitigate any adverse impacts, particularly upon adjacent residential neighborhoods.

Recommended Land Uses

All of the above-referenced locational needs and compatibility issues related to the various types of land use have been considered in the establishment of Lowell's *Future Land Use Plan*. Land use recommendations should be reflected in the City's zoning policies, development regulations, and in other planning-related studies. Knowing whether an area is likely to develop as residential or nonresidential affects how Lowell will need to accommodate that area in terms of City services, such as parks and infrastructure. The following sections outline the various types of land uses that will help to provide a positive land use pattern in Lowell with its future growth and development.

Table 3-3 outlines the amount of land that has been allocated to each land use, and it is correlated to the *Future Land Use Plan* map, **Plate 3-1**.

Table 3-3
FUTURE LAND USE CALCULATIONS
City of Lowell, Arkansas

LAND USE CATEGORY	City Limits Only		City Limits Plus Planning Area	
	Acres	Percent	Acres	Percent
Low Density Residential	3,939.6	66.5	8,701.6	75.6
Medium Density Residential	132.9	2.3	132.9	1.2
High Density Residential	38.1	0.6	38.1	0.3
Medium/High Density Residential	46.6	0.8	46.6	0.4
Manufactured Home	17.1	0.3	21.6	0.2
Subtotal: Residential Uses	**4,174.3**	**70.5**	**8,940.8**	**77.7**
Park & Open Space	51.8	0.9	51.8	0.5
Public/Semi-Public	55.1	0.9	829.3	7.2
Subtotal: Public Uses	**106.9**	**1.8**	**881.1**	**7.7**
Neighborhood Office	52.0	0.9	52.0	0.4
Business Park (campus office)	292.4	4.9	292.4	2.5
Neighborhood Service	92.1	1.6	137.5	1.2
Retail/Office	586.8	9.9	586.8	5.1
Retail (community & regional retail)	215.3	3.6	215.3	1.9
Commercial	259.3	4.4	259.3	2.3
Light Industrial	142.9	2.4	142.9	1.2
Subtotal: Non-Residential Uses	**1,640.8**	**27.7**	**1,686.2**	**14.6**
TOTALS	**5,922.0**	**100.0**	**11,508.1**	**100.0**

Source: Dunkin, Sefko & Associates, Inc.

Notes:

All land use categories include any appurtenant roadway and railroad rights-of-way.

"Park & Open Space" acreages do not include land area that will be devoted to small neighborhood parks in the future since the exact size/configuration of these park facilities will not be known until they are designed into residential subdivisions and dedicated as public parks. For planning purposes, the acreage of each neighborhood park site should be between three and five acres.

Residential Land Uses

Residential land use is the predominate use within the City currently, and it is recommended within the *Future Land Use Plan* that this continue. It should be noted that single-family residential land uses can be buffered/transitioned from nonresidential uses through the development of limited amounts, and strategically planned, medium and high-density residential land uses. This type of buffering/ transitioning has been shown in several locations on the *Future Land Use Plan* map.

Differing densities of single-family residential areas can also be used to transition from the higher densities of the City's core area or along major roadways outward in gradually decreasing housing densities in the more semi-rural areas where Lowell will grow in the future (see **Plate 3-2**, *Residential Density Plan*). The purpose of the *Residential Density Plan* is to provide City leaders with guidance on which residential densities are most appropriate in the City's future neighborhood areas. For example, single-family residential areas shown as "D" or "E" on the *Residential Density Plan* are deemed to be appropriate for lot sizes ranging from 8,000 to 10,000 square feet in size *(Note: new areas with 8,000 square-foot lots should be addressed in the City's zoning regulations as allowable only in a master-planned, Planned Development setting).* Areas shown as "A" (one acre minimum lots) on the Plan are typically located farthest from the City's core area and major roadways – this is due to the low densities anticipated in these areas, and often to the limited availability of City utilities (such as water and sanitary sewer) and services in these areas. With the exception of the easternmost portions of the City, most single-family residential areas are designated as a combination of two densities, such as "A/B", "B/C" or "C/D". These dual designations mean that the areas so designated are appropriate for a combination of densities which should, in turn, yield more variety and choice in lot sizes than would occur if the areas had only a single designation. For example, an area designated as "C/D" on the Plan should be developed with a variety of lot sizes ranging from 10,000 square feet to 15,000 square feet. An "averaging" approach can be used to achieve the recommended densities in a "C/D" area by ensuring that the average lot size in that area is around 12,500 square feet. In theory, this means that for every 10,000 square-foot lot there should be at least one 15,000 square-foot lot in that area, or that the cumulative average of all lots somehow reaches 12,500 square feet in any combination of lot sizes.

The purpose of Planned Development (PD) zoning is to promote flexibility in subdivision design, which can be a very helpful tool for developers who believe they need higher densities than those that may be shown on the Residential Density Plan in order to make certain projects worthwhile. At the same time, PD zoning gives the City the ability to negotiate for other "public interest" things in return such as better quality construction standards, an increased amount of land devoted to open space, and other similar things. PD zoning should be a "win/win" situation in that both the developer and the City should get something they want out of it. With respect to residential densities, PD zoning can be a useful vehicle for a developer to "buy down" to the next smaller minimum lot size category, as follows:

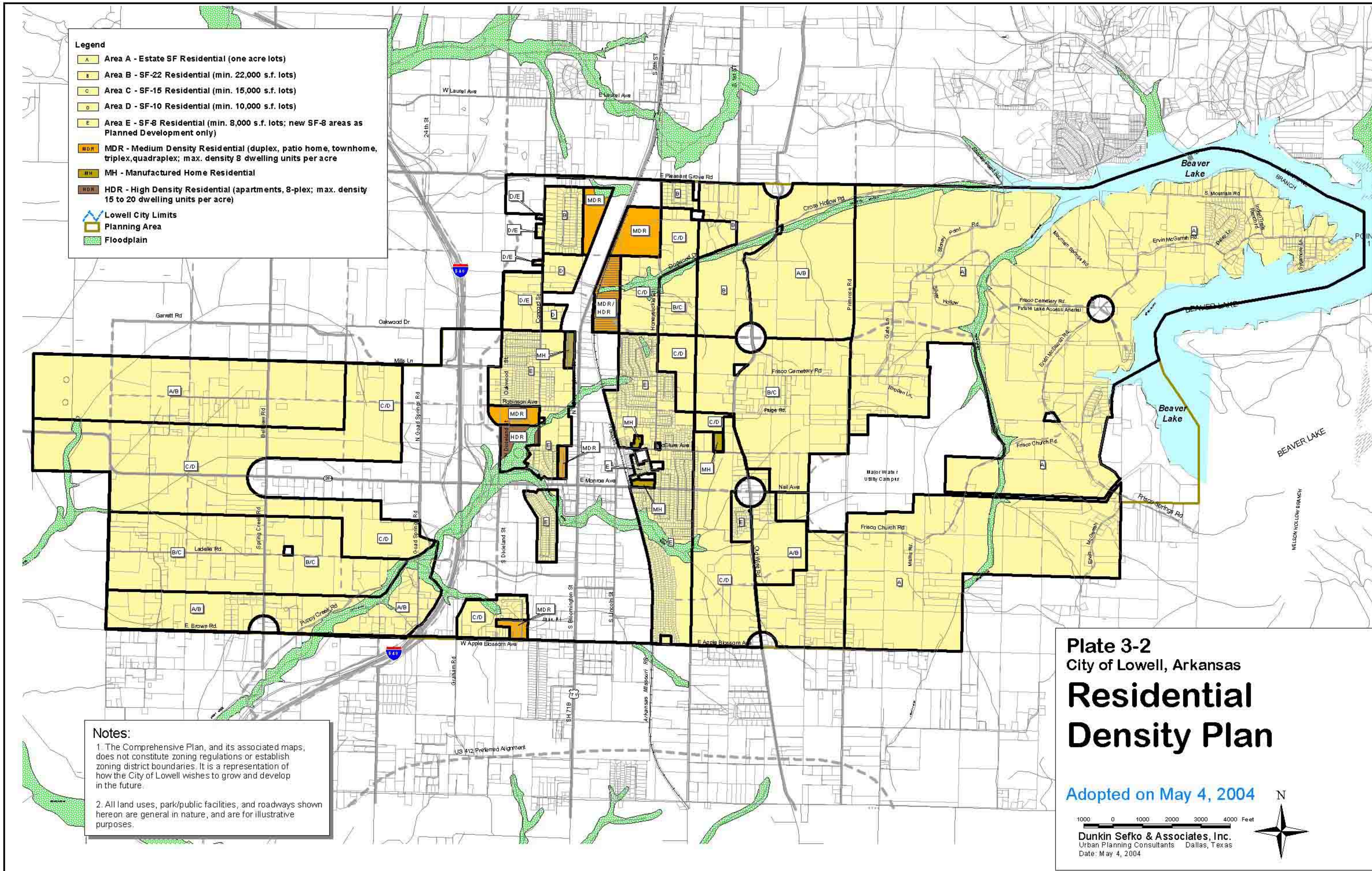
- "A" (one acre lots) to "B" (22,000sf lots)
- "B" (22,000sf lots) to "C" (15,000sf lots)
- "C" (15,000sf lots) to "D" (10,000sf lots)

- "D" (10,000sf lots) to "E" (8,000sf lots)

The ability to "buy down" one lot size category should only be allowed in a Planned Development (PD), and only if most, if not all, of the following design objectives are satisfied (for a dual-designated area, such as "C/D", the "buy down" would be to the smallest lot size category in that area, "D" in this example – not to the "E" category):

- Building setbacks should be staggered along each block face (for variety along the streetscape).
- A higher percentage (than is normally required) of the homes will be standard masonry exterior construction.
- The architectural design of the homes will have highly articulated rooflines, dormers, varied exterior wall planes (rather than flat "cube-like" appearance, especially for front elevation), etc.
- Limitations are placed upon how often a façade design can be repeated (e.g., no more often than every fourth home).
- A greater percentage (than is normally required) of the homes will have "J-swing", "side-swing" or rear entry garages.
- The development will be a gated subdivision with privately owned streets (streets and alleys, if any, will be owned and maintained by a mandatory homeowners' association).
- A greater amount (than is normally required) of open space will be dedicated to public use and enjoyment, and/or a school site is to be dedicated to the School District for a neighborhood school.
- Roofing to be used will exceed the minimum 25-year standard.
- Decorative light fixtures (approved by the City and the electric utility provider) will be used for all street lighting.
- Decorative street and sidewalk paving patterns (approved by the City) will be used at all street intersections, nonresidential driveway openings (such as a church or school), and pedestrian crosswalk areas.
- The front yards of each home will have a landscaping package (in addition to the two required shade trees) of at least two small ornamental trees, 16 shrubs, sodded turf grass, and undulating, or non-linear, foundation planting beds of a hardy species of ground cover.
- The minimum house size is increased by at least 0.10 square foot for every one foot (1') decrease in the minimum (or average) lot size.

The *Residential Density Plan* should be used as a guidance tool for all zoning requests proposing residential land uses.


Legend
Area A - Estate SF Residential (one acre lots)
Area B - SF-22 Residential (min. 22,000 s.f. lots)
Area C - SF-15 Residential (min. 15,000 s.f. lots)
Area D - SF-10 Residential (min. 10,000 s.f. lots)
Area E - SF-8 Residential (min. 8,000 s.f. lots; new SF-8 areas as Planned Development only)
MDR - Medium Density Residential (duplex, patio home, townhome, triplex,quadraplex; max. density 8 dwelling units per acre
MH - Manufactured Home Residential
HDR - High Density Residential (apartments, 8-plex; max. density 15 to 20 dwelling units per acre)
Lowell City Limits
Planning Area
Floodplain
Notes:
1. The Comprehensive Plan, and its associated maps, does not constitute zoning regulations or establish zoning district boundaries. It is a representation of how the City of Lowell wishes to grow and develop in the future.
2. All land uses, park/public facilities, and roadways shown hereon are general in nature, and are for illustrative purposes.
Plate 3-2
City of Lowell, Arkansas
Residential Density Plan
Adopted on May 4, 2004
N
1000 0 1000 2000 3000 4000 Feet
Dunkin Sefko & Associates, Inc.
Urban Planning Consultants Dallas, Texas
Date: May 4, 2004
Beaver Lake
BEAVER LAKE
W Laurel Ave
E Laurel Ave
E Pleasant Grove Rd
Cross Hollow Rd
Garrett Rd
Oakwood Dr
Mills Ln
Robinson Ave
E Monroe Ave
McClure Ave
Nail Ave
Frisco Cemetery Rd
Frisco Church Rd
Ladelle Rd
E. Brown Rd.
Puppy Creek Rd
W Apple Blossom Ave
E Apple Blossom Ave
US 412 Preferred Alignment
Major Water Utility Campus
Future Lake Access Arterial
Frisco Springs Rd
S. Mountain Rd
Ervin McGarrah Rd.
Mountain Springs Rd
Primrose Rd
Paige Rd.
Rhoden Ln.
Silver Hollow
Stoney Point Rd.
24th St
N Goad Springs Rd
Bellview Rd
Spring Creek Rd
S Dixieland St
S Bloomington St
S Lincoln St
SH 71B
Arkansas Missouri RR
Graham Rd
Old Wire Rd
Honeysuckle St
Concord St
Oakwood St
Mallis Rd.
Gate Ln
Daley Ln.
Sycamore Ln
NELSON HOLLOW BRANCH
A A/B B B/C C/D D D/E E MDR MDR/HDR HDR MH

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Low-Density Residential Land Uses

Illustration 3-2
A SINGLE-FAMILY HOME
(A Low Density Residential Land Use)

This use is representative of traditional, single-family detached dwelling units. Of the residential categories, it is recommended that low density residential continue to account for the largest percentage of Lowell's residential land area. Although all single-family areas have been considered "low density", the City should strive for a range of lot sizes within its Land Development Code in order to adequately provide for market choice. Lowell should consider designating some very low density residential areas for one-half acre and one-acre lots in order to achieve the range of lot sizes recommended herein. Large areas of vacant land are still available for this type of development.

In order to achieve diversity in lot sizes, it is recommended that the City's zoning districts be reviewed and amended to accommodate the following lot size choices (as shown on the Residential Density Plan):

"A" Estate Single-Family Residential – large-lot, lowest density, estate-style residential areas (one acre+ lots)

"B" Single-Family-22 Residential – generously-sized residential lots (22,000sf minimum)

"C" Single-Family-15 Residential – medium-sized residential lots (15,000sf minimum)

"D" Single-Family-10 Residential – moderately-sized residential lots (10,000sf minimum; smallest lot size to be considered appropriate in Lowell in the future)

"E" Single-Family-8 Residential – small-sized residential lots (8,000sf minimum; very limited number of areas where new SF-8 neighborhoods should be located in Lowell; should only be allowed as a Planned Development/PD with bonus density incentives such as provision of open space in exchange for SF-8 lot sizes, mixture of lot sizes averaging 9,000sf or greater within the PD, etc.)

In order to ensure that future single-family developments are designed to a high standard, the City should consider applying the following guidelines to all new residential subdivisions in the future:

- All units should be structurally connected to a permanent, reinforced concrete foundation.
- All homes should be at least 90 percent masonry (e.g., brick, stone, etc. – cementitious fiberboard siding, such as HardyBoard, EIFS, stucco, and other similarly applied finishes should not be considered "masonry" for the purpose of meeting the percentage standard) on the first floor, and at least 75 percent masonry on any floor above the first (no concrete, concrete block, or metal exterior finish should be allowed on single-family homes).
- All homes should have a minimum 25-year, laminated/dimensional composition roof, or some other high quality, long-lasting roofing such as flat pan standing seam metal roofing (only with a factory baked-on, muted color finish; no bright colors or natural-colored metal

roofing), or hard-fired terra cotta tile, or slate tile, or other similar roofing material and at least ½" roof decking.

- All homes should have a minimum 6-to-12 pitched main ridge on their roofs (i.e., the predominant pitch of the main roof planes should be 6:12), and minimum 12-inch eaves/soffits.
- All homes should have a two-car attached or detached garage (same exterior finish materials as house).
- Driveways should be constructed on concrete or brick pavers (i.e., not asphalt or gravel).
- A certain percentage of homes should have "J-swing" drives or side- or rear-entry garages (to reduce the number of garage doors facing onto residential streets).
- Only a limited portion (such as 30 to 50 percent) of the garage should be allowed to protrude out in front of a home's living (i.e., air-conditioned) area (to reduce "snout house" problem).
- At least 50 percent of the streets in new residential subdivisions should be curvilinear in design (to get away from "gridded" subdivisions, and the help calm neighborhood traffic).
- At least two large shade trees (minimum 3" caliper and 7-foot tall planted height) should be required in the front yard of residential lots.
- All new residential subdivisions should be required to do all utilities underground (except for major distribution lines).
- All new residential subdivisions should be designed such that they can be connected into neighboring subdivisions, and such that convenient pedestrian and bicycle access is provided into the hike/bike trail/route system.
- Very few, if any, lots should be allowed to back up to creek, open space and drainageway areas (to enhance visibility, security and public access and enjoyment of these areas).
- All arterials surrounding and passing through residential subdivisions should have sidewalks along them – these should be constructed (or escrowed) by the developer of the overall subdivision as required public improvements (such as streets, utility lines, storm drainage structures, etc.). Amend the City's development regulations, as necessary, to ensure that sidewalks are provided for pedestrian and bicycle convenience and safety.

Medium Density Residential Land Uses

This use is representative of two to four family (duplex, triplex, quadriplex) units, patio/garden (zero-lot-line) homes, and single-family attached (townhome) dwelling units. There are currently two areas within the City with existing medium density residential land uses (duplexes), such as on the north side of Apple Blossom Avenue at Kinkade Place, and north of East Monroe Avenue at

Illustration 3-3
TOWNHOMES
(A Medium Density Residential Land Use)

Fox Run Place. New areas for medium density residential have been designated along the south side of Robinson Avenue (to buffer the single-family neighborhood on the north side from the more intense The Links multi-family complex to the south) and both east and west of the US Highway 71 Business commercial corridor, and south of Pleasant Grove Road. A third opportunity for medium density residential (either in conjunction with, or in lieu of, high density residential uses) lies east of the railroad tracks and more-or-less due east of the new school facility that is under construction between Concord Street and US Highway 71-B. Medium density residential areas generally develop at approximately eight units per acre, and this standard should be incorporated into Lowell's Land Development Code as the maximum number of units that are permitted to be developed in areas recommended for medium density residential.

The medium density residential classification is intended to provide additional housing choices for Lowell residents such that the City becomes more of a "full-life cycle" community (i.e., variety of housing choices for first-time home buyers, established families, "empty-nesters", retirees, etc.). This classification should be used in areas that would be appropriate for various types of facilities for housing the elderly such as assisted living facilities and independent living communities (apartments), provided they are low-rise and low density (maximum of eight units per acre). It may also be appropriate for a very limited number of eight-plex dwelling units only if the development is structured as a Planned Development (PD) with a maximum density of eight units per acre and with a generous amount of open space. It is desirable to require provision of a specified amount (e.g., a percentage of total land area) of usable open space in any medium density residential development (due to the very small yard size, and to help encourage friendly interaction among residents), and the City's zoning regulations should be reviewed and amended, if necessary, to ensure that adequate common open space is provided in such developments.

In order to ensure that future medium density residential developments are designed to a high standard, the City should consider applying the same applicable guidelines as for single-family residential, as well as the following additional guidelines, in the future:

- All medium density housing developments should be required to establish a mandatory homeowners association (HOA) to be responsible for ownership and maintenance of all common areas and amenities.
- Unit setbacks should be staggered.
- If a triplex, quadriplex or single-family attached development is adjacent to a single-family residential neighborhood, then transition areas (such as open space) should be incorporated into the project.
- Most garages should be attached, but some may be detached (same exterior finish materials as the dwelling units/main buildings).

High Density Residential Land Uses

Illustration 3-4
AN APARTMENT COMPLEX
(A High Density Residential Land Use)

High density residential land use is characterized by traditional apartment-type units in attached living complexes as well as congregate housing for the elderly and/or infirm. As with medium density residential, there are currently very few high density residential areas within Lowell (the most notable is The Links apartment complex). With the increased need for housing diversity that the City will experience with population growth, it is anticipated that there may be an increased market for such uses in the future. In response to this, one other primary area has been recommended for future high density residential use (either in conjunction with, or in lieu of, medium density residential uses). This area lies east of the railroad tracks and more-or-less due east of the new school facility that is under construction between Concord Street and US Highway 71-B.

This classification is also intended to provide additional housing choices for Lowell residents such that the City becomes more of a "full-life cycle" community (i.e., variety of housing choices for people new to the area, college-age students, "empty-nesters", retirees/elderly, etc.). It is desirable to require provision of a specified amount (e.g., a percentage of total land area) of landscaping/usable open space (to lessen the sense of "crowding" and to help encourage friendly interaction among residents) and other amenities in high density residential developments, especially in exchange for increased densities that might be approved in conjunction with a Planned Development/PD zoning request. Such PD zoning requests should also be required to provide extra amenities beyond what is required in a typical apartment complex, particularly if the request involves higher densities than are typically allowed.

In order to ensure that future multi-family developments are designed to a high standard, the City should consider applying the following guidelines in the future:

- The proposed multi-family tract should be adjacent to a collector or major thoroughfare (i.e., not directly adjacent to local residential streets), and all access into the complex should be from principal or minor arterials.
- All structures within the multi-family development should be at least 80 percent masonry (e.g., brick, stone, etc. – cementitious fiberboard siding, such as HardyPlank, EIFS, stucco, and other similarly applied finishes should not be considered "masonry" for the purpose of meeting the percentage standard) on the first floor, and at least 60 percent masonry on any floor above the first.
- At least fifty percent of the units should have garages, either attached or detached (this could be an exception for assisted living or other elder care facilities).
- If the development is adjacent to a single-family residential neighborhood, transition areas (open greenspace, buffer areas, medium density development, etc.) should be incorporated into the project.

- Based upon the density of the complex, an appropriate amount of usable open space should be required.
- All future multi-family developments should be gated and should have limited access entry and security perimeter fencing.
- All future multi-family developments should have recreational facilities for residents (such as a playground and swimming pool), and a common gathering facility (such as a clubhouse).
- All future multi-family developments should have on-site, live-in management and security personnel.
- A maximum of 15 units per acre should be permitted; this standard should be incorporated into Lowell's Land Development Code.

Manufactured Housing Land Uses

Illustration 3-5
A MANUFACTURED HOME

There is one area within Lowell that is characterized by the presence of a number of manufactured homes (west of US Highway 71-B and north of Robinson Avenue), and several isolated locations of one or a few manufactured homes. These areas provide affordable housing for a segment of the City's citizens. On the *Future Land Use Plan* map, the areas that have been designated for manufactured homes (including industrialized homes and mobile homes) primarily consist of areas wherein these types of homes are currently located, and where they might be used as a buffer between other types of residential uses and nonresidential land uses. It is not anticipated that many additional such areas will be needed, since Lowell already has some areas devoted to this type of housing, since Lowell already has a reasonable amount of affordable housing choices in existence, and since adequate market choice for manufactured homes is likely already provided within the overall northwest Arkansas region.

It is desirable to require provision of a specified amount (e.g., a percentage of total land area) of landscaping/usable open space (to lessen the sense of "crowding" and to help encourage friendly interaction among residents) and other amenities in manufactured home developments.

In order to ensure that future manufactured home developments are designed to a high standard, the City should consider applying the following guidelines in the future:

- The proposed manufactured home tract should be adjacent to a collector or major thoroughfare (i.e., not directly adjacent to local single-family residential streets), and all access into the complex should be from principal or minor arterials.
- All units should be anchored to a permanent foundation (in accordance with the City's building codes), and masonry skirting (color-coordinated with the unit's exterior finishes)

should be required to totally enclose and conceal from view all axels and all anchors, footings and piers.

- All units should have garages or carports, either attached or detached, and should have at least two on-site (i.e., not on-street) concrete-paved parking spaces.
- Additional off-street visitor and supplemental parking spaces should be provided in common, concrete-paved parking areas (owned and maintained by the HOA/POA) at a ratio of one parking space for every two units, plus adequate parking areas/spaces for the parking of boats, campers and similar recreational vehicles.
- If the development is adjacent to a single-family residential neighborhood, transition areas (open greenspace, buffer areas, medium density development, etc.) should be incorporated into the project.
- Based upon the density of the complex, an appropriate amount of usable open space should be required.
- All future manufactured home developments should have recreational facilities for residents (such as a playground and swimming pool), and a common gathering facility (such as a clubhouse).
- All future manufactured home developments should have on-site, live-in management and security personnel.
- A maximum of 6 units per acre should be permitted; this standard should be incorporated into Lowell's Land Development Code.

Public Uses

The following is a discussion of parks/open space and public/semi-public uses. Both of these are considered "public uses", the subtotal of which is provided in **Table 3-3**.

Park & Open Space Land Uses

Illustration 3-6
A LOCAL PARK IN LOWELL

This land use designation is provided to identify all public parks and open spaces within Lowell. A community's park system is key to a high quality of life. Additional land should be set aside for parks, recreation and open space areas in proportion to population growth; the National Recreation and Park Association (NRPA) standard is approximately 17 acres per 1,000 people (1.7 per 100 people), not including trails. This standard in relation to Lowell and its future projected population has been addressed within the *Parks & Community Facilities Plan* (refer to Chapter 5). The park and open space areas shown on

the *Future Land Use Plan* map (**Plate 3-1**) are representative of areas that are in existence today as well as additional areas the City will have to consider in relation to new population centers that develop in the future.

Public/Semi-Public Land Uses

This land use designation is representative of uses that are educational, religious, governmental or institutional in nature, and it includes City-owned properties as well as churches, schools, cemeteries, postal facilities, the Beaver Water District campus, etc. Public/semi-public uses are generally permitted within any area; therefore, the areas shown on the *Future Land Use Plan* map include the related uses that currently exist. It is, however, anticipated that there will be a need for additional public uses with future population growth. Discussion of projected future needs in terms of public facilities and municipal employees is contained within the *Parks & Community Facilities Plan*, Chapter 5.

Illustration 3-7
A PUBLIC USE IN THE LOWELL AREA

Non-Residential Land Uses

Residents of a community should be able to live, work, shop, learn and play all within the community itself; the existence of nonresidential uses allows the "work" and "shop" components to this equation. There are several areas of the City that have been recommended for various types of nonresidential use, primarily depending on the area's location and proximity to other types of land use. The following sections discuss specific aspects of office, retail, commercial and industrial uses.

Office Land Use

There is a relatively small amount of land used for office purposes in Lowell today. The majority of office uses are located in the office park area in the southeast quadrant of Interstate Highway 540 and East Monroe Avenue, in the Northwest Arkansas Business Center office park in the southwest quadrant of East Monroe Avenue and US Highway 71-B, and at the Arvest Bank campus on the south side of State Highway 264 just west of Goad Springs Road. Office uses are in keeping with the small-

Illustration 3-8
EXAMPLE OF AN OFFICE USE

town character of the community, and it is recommended that the amount of land used for office purposes be increased around these areas that are currently developed for office use, as shown on the *Future Land Use Plan* map.

The City should establish design-related criteria for offices that develop adjacent to any adjacent residential area; such offices should be designed in such as way that is compatible with residential uses, such as the office shown in **Illustration 3-9**. In other areas of Lowell, office uses can be developed between residential and higher intensity land uses to provide for a positive transition between them, such as between the future extension of North Dixieland Street and the existing homes along Oakwood Street. It should be noted that retail uses should be permitted in designated office areas, but office uses should not be permitted to locate in areas that are considered to have high visibility and traffic counts; such areas should be preserved for retail uses, as discussed in the *Retail Land Use* section later in this chapter.

The *Future Land Use Plan* shows two different types of office land use designations, Neighborhood Office (NO) and Business Park (BP). These two land use designations have different purposes and intensities, as described below.

The Neighborhood Office (NO) land use designation is intended to include mostly small, low-rise office buildings or complexes that primarily serve the immediately surrounding neighborhoods. These may include medical/dental offices and other similar professional offices (e.g., attorneys, realtors, mortgage companies, etc.), and are generally used as a buffer between residential neighborhoods and higher intensity nonresidential uses such as retail, commercial, etc.

Illustration 3-9
EXAMPLE OF NEIGHBORHOOD OFFICE

The Business Park (BP) land use designation is intended to include larger, high-rise office complexes, typically in a campus-type setting, that serve the office/professional needs of the overall community and/or region. These can be one building or several, and they may include office headquarters for corporations and large business entities in addition to multi-tenant facilities. They are intended to enhance the City's employment base, and should generally be located along the freeway corridor as an attractive "front door" image-setting element for the community, or as a buffer between the freeway and residential neighborhoods.

Illustration 3-10
EXAMPLE OF A LOCAL RETAIL USE

Retail Land Uses

Retail land uses areas are intended to provide for a variety of retail trade, and personal and business services and establishments. As mentioned previously, retail establishments generally require higher visibility than do other types of nonresidential land use (e.g., office, commercial). In response to this need, retail land uses have been designated in the higher traffic areas of Lowell, including along Interstate Highway 540, along State Highway 264 to the west, and along US Highway 71-B. Because of the high visibility that these three highway corridors provide, the City should review its existing retail zoning district standards, and should consider either a special retail zoning district or an overlay zoning district that applies to these corridors with increased development standards related to aesthetics. It should be noted that the Interstate Highway 540 corridor also provides the City with a prime opportunity for large retailers, such as WalMart and Target stores as well as large home improvement centers, which can be designed to be compatible with existing uses and would result in increased jobs and tax revenue for Lowell.

Development along Interstate Highway 540 will become increasingly important in terms of tax revenue for the City as the local population continues to grow and reaches its ultimate capacity. Therefore, the City should protect the optimal locations for retail development that remain vacant within this corridor; a piece of property should not be developed with another type of land use when it has all the characteristics of a prime retail location.

Illustration 3-11
EXAMPLE OF A LARGE RETAIL USE

The *Future Land Use Plan* shows three types of retail land use designations, Neighborhood Service (NS), Retail/Office (R/O), and Retail (R). These three land use designations have different purposes and intensities, as described below.

The Neighborhood Service (N/S) land use designation is intended to accommodate small retail/office centers that serve the immediately surrounding neighborhoods (residents within a one-mile radius). These are typically anchored by a small grocery store or a pharmacy, and they may include small-scale personal service shops, medical/dental offices, restaurants, a convenience store/gas station, or other similar establishments on sites between five and eight acres in size.

Illustration 3-12
EXAMPLE OF A RETAIL/OFFICE COMPLEX

The Retail/Office (R/O) land use designation is intended to accommodate retail/business centers that serve a larger geographic area (residents within a two- to five-mile radius). These are typically anchored by one or more junior anchor stores, and they may include personal service shops, restaurants, convenience stores/gas stations, office buildings, or other similar establishments on sites between 10 and 15 acres in size. They are intended to enhance the City's employment and tax base, and they can be considered as "medium intensity" retail and business areas, and can be a dominant land use category along a major freeway (such as Interstate Highway 540) where convenient access and visibility are provided from the freeway (access can be via parallel service roads that have easy access to on-/off-ramps to and from the freeway).

The Retail (R) land use designation is intended to accommodate retail shopping centers that serve a larger geographic area such as the entire community or the region (residents over a five-mile or greater radius). These are typically anchored by one or more large department or discount store(s), and they may include personal service shops, free-standing "sit-down" restaurants, automotive service and accessory stores, and other similar establishments on sites over 10 acres in size. They can be considered as "medium- to high-intensity" retail areas, and they can be a dominant land use category along a major freeway (such as Interstate Highway 540) where convenient access and visibility are provided from the freeway (must have direct access to on-/off-ramps and high visibility from the freeway).

Illustration 3-13
EXAMPLE OF A COMMERCIAL USE

Commercial Land Uses

Areas designated for commercial land use are intended for a variety of higher intensity business uses and commercial establishments, often with outside storage, display and sales. Examples of such uses include convenience stores/gas stations, automotive repair shops (e.g., tires, brakes, oil/lube, auto detailing, car alarm/stereo/cellular phone installation, engine services, body shops, etc.), contractor services, pawn shops, or other similar establishments on sites generally larger than 15 acres (overall development size). These can be considered as "region-serving" commercial business districts, and they can be a dominant land use category along a major freeway (such as along the southern portion of US Highway 71-B) that is heavily traveled by cars, transport trucks, etc. Buffering should be provided between these areas and any residential neighborhoods that may be in the vicinity due to the potential negative impacts of noise and traffic generated by these uses.

One primary difference between retail and commercial uses is that retail uses tend to rely more heavily on *walk-in* business. Consequently, retail uses need the visibility that major thoroughfares provide. Commercial uses often locate along major thoroughfares not because they need the *visibility*, but because they need the *accessibility*.

Illustration 3-14
EXAMPLE OF A COMMERCIAL USE

The challenge lies in the fact that commercial uses generally have a greater need for outside storage areas, and these areas tend to lessen the visual quality of major thoroughfares. For areas in which commercial uses are permitted, especially along US Highway 71-B, the City should consider establishing increased design-related guidelines to ensure their compatibility with other uses of less intensity, and to help improve the visual appearance of commercial uses from the City's travel corridors. Within these guidelines, the City should consider requiring open storage areas to be buffered and/or screened from any adjacent residential uses and from public view (See Chapter 6, *Neighborhood & Business Enhancement Plan*). These recommendations should be incorporated into Lowell's Land Development Code and into other applicable development codes.

Light Industrial Land Uses

The industrial land use designation is applied to areas intended for a range of heavy commercial, light manufacturing and assembly, warehousing, technical/research facilities, truck transport terminals, truck stops/travel centers, and other similar industrial and transport business uses. These should generally be located along railroad lines, where possible, and buffering should be provided between these areas and any residential neighborhoods.

Illustration 3-15
EXAMPLE OF AN INDUSTRIAL USE

Large tracts of land with easy access to major thoroughfares are becoming increasingly hard to find for the industrial business community – Lowell has such tracts available in a couple of locations. The *Future Land Use Plan* map shows two primary locations that are conducive to industrial development. One of these is located between South Lincoln Street and the railroad tracks, and north of Apple Blossom Avenue. This location has valuable railroad access, but vehicular access would be mostly from Apple Blossom or South Lincoln Street. Both of these streets need to be upgraded to a better paving standard if this area is going to thrive as an industrial park location.

The second location for light industrial uses is north of Apple Blossom Avenue and west of US Highway 71-B. Vehicular access into this area is problematic, however, due to the way the area has been allowed to develop so far, and due to the fact that is somewhat land-locked and lacks direct access (for large trucks) onto either US Highway 71-B or Apple Blossom. Industrial uses already located in this area only have access via a sub-standard, gravel road (an unimproved segment of Jane Place) onto US Highway 71-B. Vehicular, especially truck, access into this area needs to be drastically improved for industrial businesses, or any other type of business, for that matter, to remain viable in the area.

Industrial businesses in Lowell should be involved in light industrial activity, that is, business would mostly be contained within a building (i.e., a minimal amount of open storage). Examples of this type of use include high-tech services, medical services, software manufacturing, and related assembly. Such businesses tend to have many of the advantages of industrial uses (i.e., employment, increased tax base) without the disadvantages often related to such uses (i.e., adjacency challenges, pollution, truck traffic, etc.). Lowell probably has enough large truck-oriented industrial uses, so efforts to attract new industrial and manufacturing businesses should be focused upon other businesses that are not completely oriented toward, and dependent upon, large trucks such as high-tech and bio-tech facilities, research laboratories, software and other light manufacturing, etc.

Illustration 3-16
EXAMPLE OF AN INDUSTRIAL USE

Lakeside Development

The *Future Land Use Plan* map shows an area along the edge of Beaver Lake as a possible location that might be suitable to create a new tourist, recreational and economic development destination for Lowell. This area is intended to provide the community with a master-planned lake- and entertainment-related development, which would have the added benefits of creating additional tax revenues and jobs for Lowell residents that are close to home, and it takes advantage of the scenic and recreational opportunities of Beaver Lake. It is also intended to become a place for Lowell residents (as well as visitors from outlying areas) to go to shop, work (some offices), meet neighbors to eat in one of several lakefront cafés with outdoor deck dining areas, enjoy limited commercial amusements (indoors only, not outdoor), see a movie in a small-scale indoor movie theater (only a few screens, not a "megaplex cinema"), take a child fishing, purchase locally grown produce in a small farmer's market setting, gather for outdoors-related community events and festivals, and other similar activities. Significant amounts of open space and landscaping should be encouraged within this development, and open storage should be discouraged (or even prohibited) in order to ensure an attractive appearance.

The portion of Beaver Lake that abuts the potential Lakeside Development area is classified by the US Army Corps of Engineers as suitable for "limited development" (*Shoreline Management Plan for Beaver Lake*, US Army Corps of Engineers, August 1998) which may include a courtesy boat dock (not a full marina with boat storage, rentals, fueling, etc.) to allow boaters to tie up for a short period of time to enjoy the restaurants and retail/service uses in the development. Since the time frame to apply for and gain approval of the necessary permits through the Corps is quite lengthy, it is recommended that the City initiate those proceedings as soon as possible such that the permit-acquisition process can be at least partially completed by the time a viable developer becomes interested in developing the district.

Illustration 3-17
BEAVER LAKE

Town Center

This land use designation is intended to provide the community with a central, mixed-use "focal point" (as the "heartbeat of Lowell") and center of business/government near the center of the City through careful redevelopment of Lowell's original business district area. The boundaries of the Town Center are proposed to be East Monroe Avenue on the south, Jackson Avenue and the original downtown buildings on the east, McClure Avenue on the north, and the rear of the retail lots along US Highway 71-B on the west (see **Illustration 3-18**). It is also proposed to include the additional area at the northeast corner of McClure Avenue and the railroad tracks (the historical museum).

Some vacant land parcels immediately to the south of the designated Town Center area (from East Monroe Avenue south to the creek) have already started to develop as office uses (including some medical offices) and as retail/light commercial uses. Due to its immediate proximity to the future Town Center, and since the appearance of its structures and building sites will have a direct visual impact upon the future Town Center, it is recommended that a "master-planning" (and architecturally coordinated) approach be taken with respect to development in that area such that it will have a positive visual influence upon the future "Heart of Lowell" district. An overlay zoning district should be crafted and adopted as soon as possible to help protect the future Town Center area from building types and uses that may not be desirable or compatible with the overall vision for the "Heart of Lowell" area.

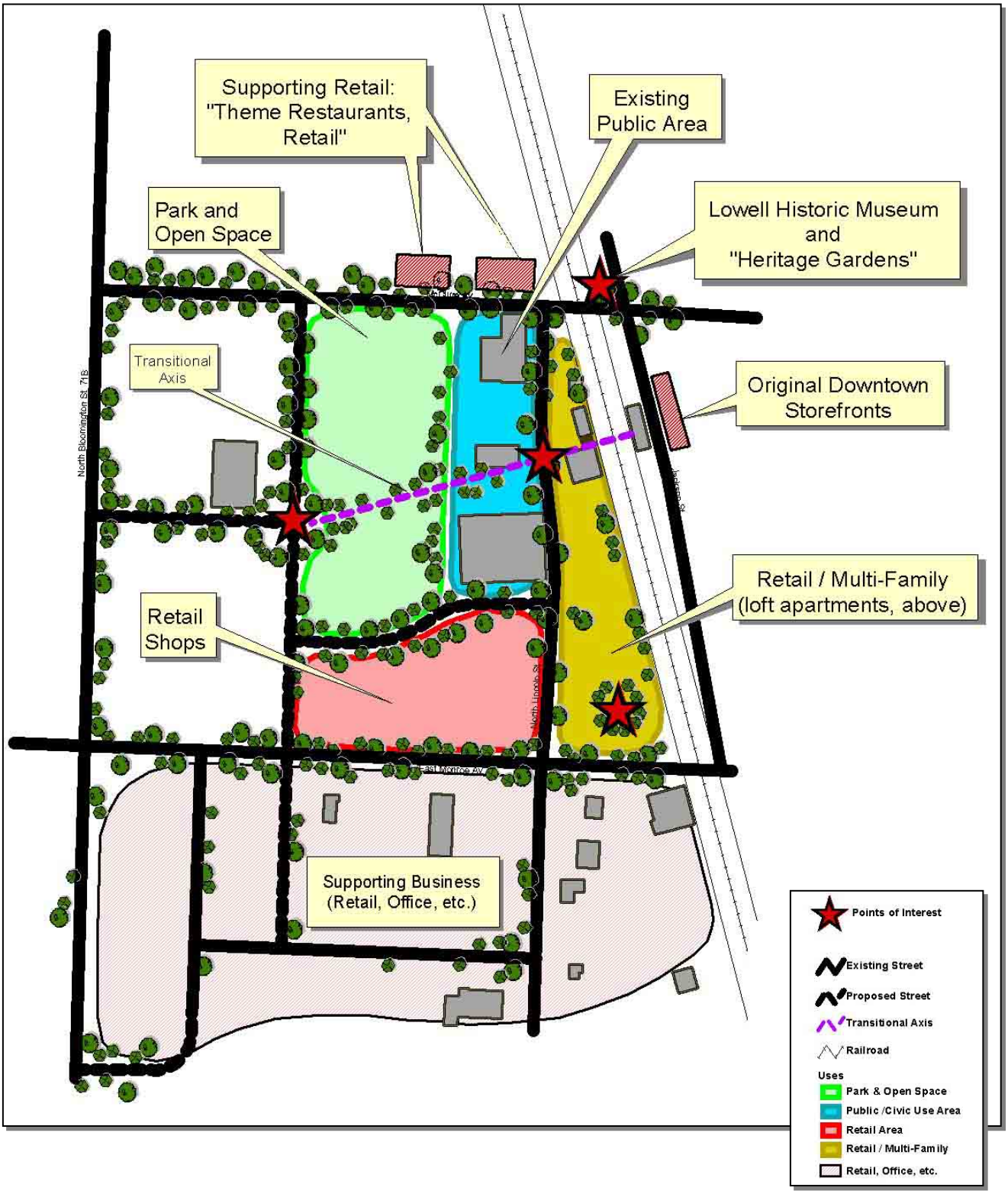


Illustration 3-18
CONCEPTUAL DIAGRAM - TOWN CENTER
"HEART OF LOWELL"

The new Town Center area is intended to provide the community with additional tax revenues and jobs that are close to home. It is also intended to become a "people place" for Lowell residents to go to shop, conduct personal and government-related business, live in the same place as their business (i.e., a few "loft" apartments located on the second floor above retail shops), meet neighbors to eat in a restaurant or café or to see a movie in a small-scale indoor movie theater (only a few screens, not a "megaplex cinema"), enjoy arts/cultural facilities (such as the community's historical museum), gather for community events and festivals (such as a Christmas-tree lighting, holiday festival, etc.), and other similar activities. McClure Park should be incorporated into the Town Center, and it should be enhanced with a public plaza or open space area and with additional landscaping and streetscape fixtures. Open storage should be prohibited in order to ensure an attractive appearance from surrounding roads and from neighboring properties. A comprehensive streetscape program should be developed to create a special theme and identity for the district, and a special zoning district (which should include adjacent areas as well, such as to the south of East Monroe Avenue and along the east side of US Highway 71-B) should be created to help ensure high quality developments in the vicinity in terms of appropriate land uses; building setbacks, height and orientation; landscaping and open space; signage; lighting; parking ratios; architectural design; performance standards; hours of operation (if it is decided that these should be restricted); etc.

The "Heart of Lowell" Town Center should be thought of as a positive "image setting element" in northwestern Arkansas, and as a source of civic pride for residents of Lowell. It should be firmly established as the "hub" of City governance, as well as a desirable place for social interaction, entertainment, education and leisure. The City should maximize land values (by only allowing land uses that are conducive to the spirit and intent of the district) and a "sense of community" by promoting special activities, celebrations and events within the Town Center, while at the same time protecting and preserving existing residential areas to the east. Land uses which do not contribute to the district's purpose should be discouraged or prohibited, along with land uses which tend to promote idle land, detract from the area's appearance, and which are not generally complementary to the district's intent.

The following sections outline overall design concepts for the proposed "Heart of Lowell" Town Center district, and provide thoughts and recommendations on many design elements which, if applied uniformly throughout the district, will make Lowell's new Town Center stand out as unique, attractive and vibrant from a social and economic standpoint.

Overall Design Concepts:

- Mixed-use development oriented toward the pedestrian – an attempt to get people out of the automobile for exploration, municipal business, social interaction, and experiencing the community's "center" of governance, leisure and education.

- Architectural "theme" – promote variety and compatibility in architectural form, with predominantly masonry exterior finishes and highly articulated facades (use the Arvest Bank and other aesthetically pleasing buildings, such as the Shelter Insurance building in Springdale and the Village Center in Bella Vista, as good examples to follow).

- Visual screening for at-grade and rooftop-mounted mechanical equipment, satellite dishes, etc. (i.e., not visible from street or neighboring properties).

- Arrangement of buildings within the district (future developments and redevelopments):
  - Government/office/retail uses – at-street-grade office, retail and government uses with shared/common parking areas and driveways.
  - Residential uses – maybe some "loft apartment units" (i.e., apartments on second floor over businesses on the first/street level); mostly intended for business owners to live and work within the Town Center area; clustered parking areas within interior of development but convenient to individual units.

- Desired and encouraged land uses:
  - Governance uses (City Hall, police/fire station, library, civic center, youth/senior activity center, maybe others)
  - Leisure uses (public parks/plaza area)
  - Educational uses (elementary school)
  - Office uses; small business "incubator" building, medical offices, etc.
  - Indoor marketplace, enclosed "mini-mall" with leased booths, crafters' mall, etc.
  - Artists' studios/galleries
  - Retail shops (small scale), cafés, gourmet/specialty foods, etc.
  - Personal service uses (e.g., hair/barber salon, florist, dry cleaners, etc.)
  - Business service uses (e.g., small copy shop, mail center, office supplies, etc.)
  - Loft (upper floor) apartments
  - Cart/street vendors (during special events; with appropriate City permits)
  - Entertainment uses (indoors only) – a small dinner theater or playhouse, youth entertainment uses (e.g., skating rink, youth sports/fitness club, arcade/laser tag, teen "club"), "tot lot" playground, etc.

Traffic Circulation Concepts:

- Traffic "calming" within the district – slow down traffic for pedestrian safety, and to encourage looking around and the "discovery" of shops and businesses within the Town Center (particularly east of the railroad tracks and south of Monroe Avenue).

- Encourage shared/joint use of parking areas by neighboring businesses.

- Off-street parking areas behind building fronts with periodic driveway openings and/or pedestrian "mini-malls" (i.e., passageways with some store fronts connecting parking with the street fronts).

- Temporary traffic bollards – ability to close off North Lincoln Street and Jackson Avenue or traffic aisles within the district for festivals and special events.

Pedestrian Circulation Concepts:

- Sidewalks required along all street frontages.

- Create pedestrian "linkages" (i.e., connections) between City Hall and other government buildings, cafés, the US Highway 71-B retail/business district, nearby churches, the Post Office to the south, the future linear greenbelt along Puppy Creek to the south and through the Town Center to McClure Avenue and eastward, etc.

- Pedestrian crosswalks at street intersections within the Town Center and across E. Monroe Avenue, North Lincoln Street and McClure Avenue (and across US Highway 71-B at Monroe and McClure, if feasible).

- Bollards at intersections wrapping around sidewalk corners – keeps vehicles out of the pedestrian domain, and communicates the presence of the street/traffic to pedestrians; also helpful for visually impaired persons when "felt" with canes.

- Street trees for shade and comfort.

- Awnings/canopies on all building fronts along pedestrian ways for shade, protection from rain (can be lighted and/or equipped with cooling mist systems to enhance the "pedestrian" experience).

- Accessibility – ADA-compliant barrier-free ramps at all crosswalks; sidewalk/pedestrian paving comfortable for walking.

Streetscape Concepts:

- Unique/special type of street lighting fixtures that are pedestrian scale, and maybe "turn-of-the-century" style; fixture spacing to provide adequate lighting coverage such that a sense of safety and security prevails; street light standards equipped with brackets for a holiday banner system; traffic signal standards on US Highway 71-B at Monroe Avenue replaced with standards matching Town Center street light fixture design (to signify entry into a "special place").

- Appropriately styled streetscape fixtures such as benches, waste receptacles, bicycle racks, public lockers (for bicyclists and joggers using the trail system) planters, and removable bollards.

- Paving patterns (brick pavers or stamped concrete) in street intersections.

- Paving patterns (brick pavers or stamped concrete) at private development driveway openings along Monroe Avenue, North and South Lincoln Street, and McClure Avenue (and maybe along US Highway 71-B as properties redevelop in the future).

- Brick pavers for crosswalks and corner sidewalk areas.

- Banner system – for seasons, holidays, special events, etc. (brackets available on street lighting poles).

- Public art – permanent or "traveling" pieces of sculpture displayed in strategic locations within the district (e.g., on the City Hall campus, in public plaza, at the Library, etc.).

- Bicycle racks and public lockers to encourage use of bikes as a transportation mode.

- Appropriately styled clock or campanile at a prominent place within the district (maybe in public plaza; possibly donated from a private entity).

- Landscaping – landscaped front yard areas/buffers; image-setting, "signature" plant palette for Town Center.

- Street trees – to provide shade, visual appeal, rhythm and continuity along street (can be donated/dedicated by individuals):
  - Some evergreen, some ornamental (flowering, fall color, etc.)
  - Planted in green parkways or with tree grates
  - Dramatic uplighting
  - Bubbler automatic irrigation
  - Holiday lighting (in season)

- Dedication/acknowledgment plaques (for any donations of land, trees, art pieces, etc.).

- City Hall campus ideas:
  - Brick paver or stamped concrete sidewalks and small public plaza area.
  - Provide a shady patio/picnic spot (for outdoor lunching under shade trees).
  - Significant landscaping.
  - "One-Stop-Shop" – take care of several errands in one place

Signage:

- On-site signs – monument style, masonry to match building exterior; maximum square footage and spacing requirements; no pole-mounted, flashing or moving signs.

- Kiosk sign in public plaza – "where-to-find" map of businesses on one side, environmentally enclosed public notice (i.e., bulletin) board on the other side (can be locked, if desired).

- Special design and color scheme for street name signs and directional (i.e., "where-to-find") signage within the Town Center district (easily visible at night; unique design for Town Center area; also used for large sign blades on traffic signals on US Highway 71-B at Monroe Avenue).

Utilities and Infrastructure:

- Underground power/telephone lines (to reduce overhead "clutter").

- City utilities (i.e., water, sanitary sewer, storm drainage, etc.) – review to ensure that they are designed for future "developed out" scenario.

Administration of the Future Land Use Plan

Development Proposals & the Future Land Use Plan

At times, the City will likely encounter development proposals that do not directly reflect the purpose and intent of the land use pattern shown on the *Future Land Use Plan*. Review of such development proposals should include the following considerations:

- Is the proposed change a better use than that recommended by the *Future Land Use Plan*?
- Will the proposed change enhance the site and the surrounding area?
- Will the proposed use impact adjacent residential areas in a negative manner? Or, will the proposed use be compatible with, and/or enhance, adjacent residential areas?
- Are uses adjacent to the proposed use similar in nature in terms of appearance, hours of operation, and other general aspects of compatibility?
- Does the proposed use present a significant benefit to the public health, safety and welfare of the community? Would it contribute to the City's long-term economic well-being?

Development proposals that are inconsistent with the *Future Land Use Plan* or that do not meet its general intent should be reviewed based upon the above questions and should be evaluated on each proposal's own merit. It should be incumbent upon the applicant to provide evidence that the proposal meets the aforementioned considerations and supports community goals and objectives, as set forth within this Comprehensive Plan. It is important to recognize that proposals contrary to the Plan could be an improvement over the uses shown on the Plan for a particular area. This may be due to changing market, development, and/or economic trends that occur at some point in the future after the Plan is adopted. If such changes occur, and especially if there is a significant benefit to the City of Lowell, then these proposals should be approved, and the *Future Land Use Plan* should be amended accordingly.

Zoning & the Future Land Use Plan

Arkansas state law authorizes cities to adopt plans pertaining to the development of land, and it is generally understood that zoning and development regulations should be adopted in accordance with these plans. In other words, the plans a City adopts for its long-term growth and development essentially "set the stage" for regulatory control of how land develops and how land uses are distributed throughout the community. Consequently, the City's zoning map should reflect the *Future Land Use Plan* map to the greatest extent practical. Therefore, approval of development proposals that are inconsistent with the *Future Land Use Plan* will often result in inconsistency

between the *Future Land Use Plan* and the zoning regulations. It is recommended that Lowell initiate proceedings to amend the *Future Land Use Plan* immediately following a City Council vote rezoning land that results in such inconsistency.

It should be noted that in order to expedite the process of amending the *Future Land Use Plan* to ensure that zoning regulations correspond, the related amendment recommendation(s) may be forwarded simultaneously with the rezoning request(s). If a rezoning request *is consistent* with the Plan, the City's routine review process would follow. It is recommended that the City of Lowell engage in regular review (at least annually) of the *Future Land Use Plan* to further ensure that zoning is consistent and that the document and the map reflect all amendments made subsequent to the Plan's initial adoption. It should be noted that specific implementation measures related to zoning are addressed within the *Implementation Strategies*, Chapter 7.

Lowell's existing zoning districts will need to be modified, and expanded, to reflect recommendations contained within the Comprehensive Plan. This is to ensure that the land uses recommended herein are accurately represented within the zoning districts available to the development community. Planned development (PD) zoning, which will also be mentioned in the *Implementation Strategies* chapter of this Comprehensive Plan, is also a valuable tool that can be used in Lowell to ensure that development is consistent with the Comprehensive Plan.

Costs Associated With Updating the Future Land Use Plan

Many cities across Arkansas have established ways in which to help recoup the costs of consistent and continual updates of the *Future Land Use Plan* map and Zoning Map. One of the most effective ways is to establish a fee ordinance. The adoption of such an ordinance would allow Lowell to defray these costs by transferring all or a portion of them to the development community. For example, the City could establish one fee for amending the *Future Land Use Plan*, and a separate fee for amending the Zoning Map; charging the development community such fees may be cause for increased consideration of submitting a proposal that is inconsistent with either of these documents. It is recommended that the City, if it has not done so already, consider drafting and adopting a fee ordinance, with specific fees outlined for amending the *Future Land Use Plan* map and Zoning Map.

In Conclusion

The recommendations contained herein should guide Lowell's future land use planning and related policies. It is important to note that the *Future Land Use Plan* map is not the community's official zoning map. Rather, it is a guide to decision-making in the context of the City's future land use patterns. The *Future Land Use Plan* text and map should be used consistently and should be updated as needed, as coordinated, quality development continues in Lowell over time.

It is not the City's intent to hinder or otherwise harm legitimate businesses that existed as of the adoption and effective date of this Comprehensive Plan. This Plan is intended as a "statement of the City's intent" to, over time, transition uses of properties toward those that conform more closely to the Comprehensive Plan and its associated maps, primarily through attrition. No conscious effort is anticipated to be undertaken by the City to forcefully downzone properties against owners' wishes to bring them into better conformance with the Plan.

The official copy of the *Future Land Use Plan* map should be on file at Lowell's City Hall. The boundaries of land use categories as depicted on the official map should be used to determine the appropriate land use category for areas that are not clearly delineated on the smaller-scale map contained within this Comprehensive Plan document. The recommended future land use policies contained throughout this *Future Land Use Plan* are summarized in **Table 3-4**.

Table 3-4
FUTURE LAND USE PLAN RECOMMENDATIONS
City of Lowell, Arkansas

Review the current zoning districts to ensure that the recommended land uses are accurately represented within the zoning districts available to the development community, and to ensure that the zoning districts are located consistent with the *Future Land Use Plan* map.
Consider designating some of the recommended low-density residential areas for one-half acre and one-acre lots in order to achieve choice and variety in lot sizes, as well as more "upscale" housing units within the City.
Use the *Residential Density Plan* as a guide for decision-making when considering a zoning request involving residential land uses.
Establish a maximum of eight units per acre within the Land Development Code for the recommended medium density residential areas, and 15 units per acre for the recommended high density residential areas.
Incorporate the single-family, medium density, high density, and manufactured home development guidelines outlined herein into the City's Land Development Code in order to obtain more "upscale" housing units within the City.

Table 3-4 (Continued)
FUTURE LAND USE PLAN RECOMMENDATIONS
City of Lowell, Arkansas

Review the City's Land Development Code to ensure compliance with SB 407 (pertaining to municipal regulation of mobile homes and manufactured housing units).
Establish design-related criteria for offices and for other nonresidential land uses that develop adjacent to any adjacent residential area; such developments should be designed in a way that is compatible with residential uses.
Permit less intense nonresidential uses in higher intensity nonresidential areas (e.g., office uses in designated retail use areas), but not vice versa.
Review existing retail and commercial zoning district standards, and consider establishing either a special zoning district or an overlay zoning district that applies to the Interstate Highway 540, US Highway 71-B, and State Highway 264 corridors with increased development standards related to aesthetics for future nonresidential land uses.
Protect the optimal locations for retail development that remain vacant within the City's major travel corridors; a piece of property should not be developed with another type of land use when it has the characteristics of a prime retail location.
Initiate a feasibility study to determine whether or not the Lakeside Development district (on Beaver Lake) is feasible in the location shown on the Future Land Use Plan, and begin taking the necessary steps to make application to the US Army Corps of Engineers for permits that will be necessary for this type of development on the Lake.
Create a "downtown revitalization task force" to begin conducting more detailed studies of how the City's original downtown area can be re-developed to enhance, and build upon, the "Heart of Lowell" Town Center concept outlined herein; also begin acquisition of key land parcels (such as the Allen Canning Co. tract and the tracts between Lincoln Street and the railroad tracks) that can be used toward making the Town Center a reality.
Create, and adopt into the Land Development Code, a simplified overlay zoning district for the future Town Center area (including the area south of Monroe Avenue to the creek) with development and design controls that will help to ensure that any additional development or re-development in the area will positively influence the future "Heart of Lowell" Town Center district.
Encourage property owners in the area just south of the future Town Center to take a "master-planning" (and architecturally coordinated) approach with respect to development in that area such that it will have a positive visual influence upon the future "Heart of Lowell" district.
Initiate dialogue with the railroad company who owns the north/south rail line through Lowell in order to convince them to annex all railroad right-of-way from East Pleasant Grove Road south to Apple Blossom Avenue into the City.

Table 3-4 (Continued)
FUTURE LAND USE PLAN RECOMMENDATIONS
City of Lowell, Arkansas

Review the City's zoning and development regulations to ascertain the extent to which they are (or are not) suitable for regulating development over the Cave Springs Recharge Area, and amend the regulations, as necessary, in order to protect this environmentally sensitive area as much as possible. Most of the Recharge Area should be devoted to large-lot residential use (3/4 acre lots and up), and use conventional sewage collection systems (not on-site systems) over the Recharge Area to the greatest extent possible. Where no sewage collection system is available, require developers and builders to install "dry" sanitary sewer lines (capped off) such that they will be already in place by the time central sewage collection becomes available to the area.
Initiate proceedings to amend the *Future Land Use Plan* immediately following a City Council vote rezoning land that results in inconsistency between the City's *Future Land Use Plan* map and the Zoning Map.
Regularly review the *Future Land Use Plan* to further ensure that zoning is consistent, and that the document and the map reflect all amendments made subsequent to the Plan's initial adoption.
Consider establishing a fee ordinance, with specific fees for amending the *Future Land Use Plan* map and Zoning Map.

Note: Not in any order of priority.

Source: City of Lowell's *Future Land Use Plan.*

City of Lowell

COMPREHENSIVE PLAN 2025

Chapter 4: The Master Street Plan

Introduction

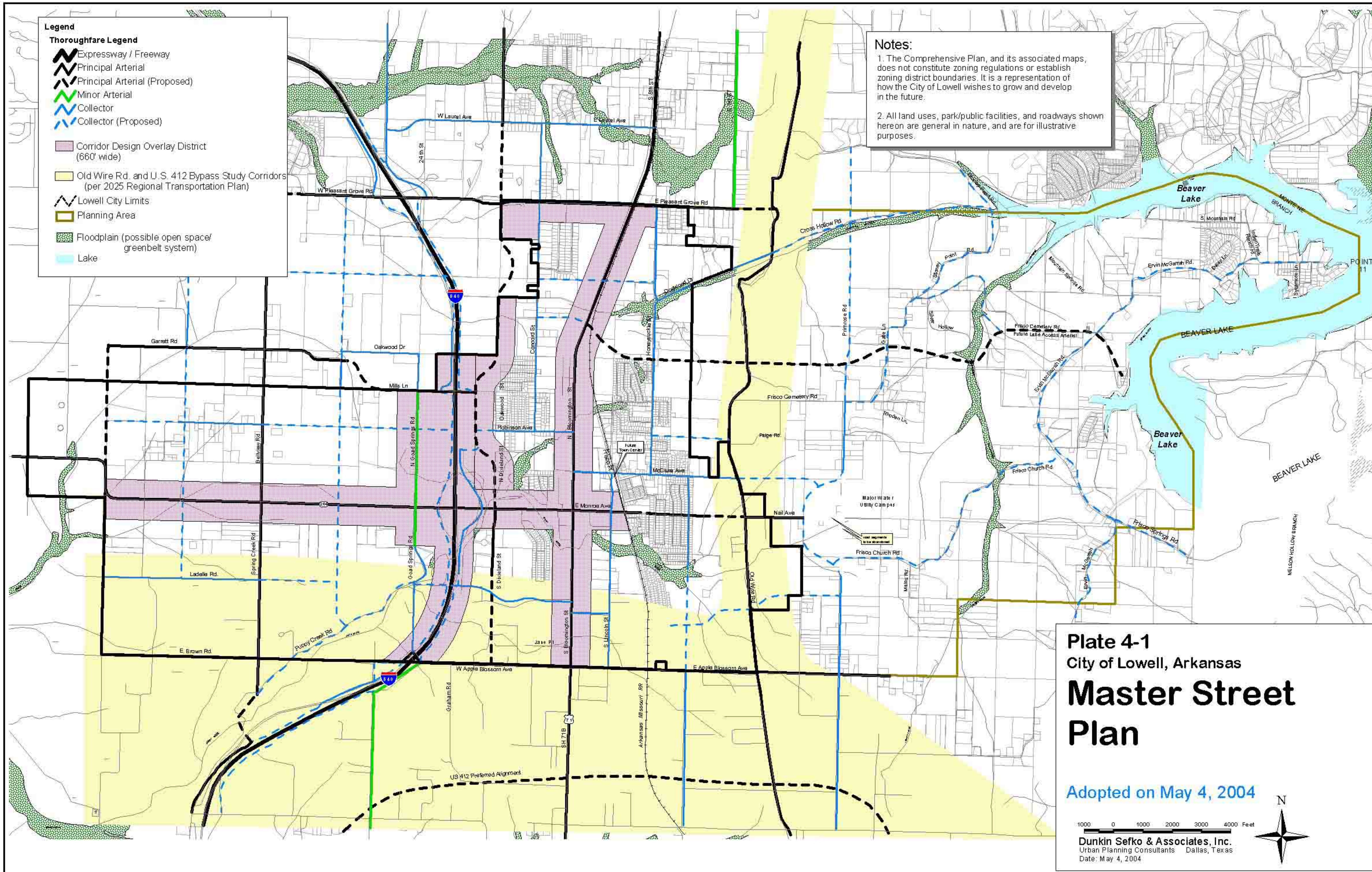
A community's thoroughfare system is vital to its ability to grow in a positive manner. Transportation is inherently linked to land use. The type of roadway dictates the use of adjacent land, and conversely, the type of land use dictates the size, capacity and flow of the roadway. Many of the decisions regarding land uses and roadways within Lowell have already been made; rights-of-way in the core area of the City and in some residential areas were established, and the roadways were constructed years ago. A major challenge for the City of Lowell now lies in the accommodation of population growth within the existing thoroughfare system, and in the accommodation of new land development through the expansion of that system.

Lowell's thoroughfare system should ultimately:

- Protect the ambience, character, and quality of existing neighborhoods by directing traffic generated by growth away from existing neighborhoods.
- Provide gateways to nonresidential areas from major freeways and arterials to ensure easy access to local businesses.
- Provide ready access and eliminate congestion to future land uses.

The Functional Classification System & Related Roadway Standards

The *Master Street Plan* for Lowell (see **Plate 4-1**) is based upon a road classification system that depicts the function of every roadway in the system. Roadway types, as discussed in the following sections, include freeways, arterials, collectors, and local streets. Their functions can be differentiated by comparing their ability to provide *mobility* with their ability to provide *access* to various locations. **Illustration 4-1**, which should be used as a reference for the following discussion, graphically depicts these functional differences. It should be noted that wherever existing rights-of-way have been identified as a different type of roadway than the type it is as it exists currently (e.g., an existing collector is shown as an arterial), this is a recommendation that the roadway be widened when and if development occurs. Existing residents and businesses should be disturbed to the least extent possible.


Legend
Thoroughfare Legend
Expressway / Freeway
Principal Arterial
Principal Arterial (Proposed)
Minor Arterial
Collector
Collector (Proposed)
Corridor Design Overlay District (660' wide)
Old Wire Rd. and U.S. 412 Bypass Study Corridors (per 2025 Regional Transportation Plan)
Lowell City Limits
Planning Area
Floodplain (possible open space/ greenbelt system)
Lake
Notes:
1. The Comprehensive Plan, and its associated maps, does not constitute zoning regulations or establish zoning district boundaries. It is a representation of how the City of Lowell wishes to grow and develop in the future.
2. All land uses, park/public facilities, and roadways shown hereon are general in nature, and are for illustrative purposes.
W Laurel Ave
E Laurel Ave
24th St
S 8th ST
W Pleasant Grove Rd
E Pleasant Grove Rd
Cross Hollow Rd
Dogwood Dr
Garrett Rd
Oakwood Dr
Mills Ln
Concord St
Honeysuckle St
Primrose Rd
Gate Ln
Stoney Point Rd.
Silver Hollow
Mountain Springs Rd
Ervin McGarrah Rd.
S. Mountain Rd
Daisy Ln.
Sycamore Ln.
POINT 11
Beaver Lake
MONTE NE BRANCH
BEAVER LAKE
Frisco Cemetery Rd.
Future Lake Access Arterial
Frisco Cemetery Rd
Rhoden Ln.
Paige Rd.
Future Town Center
McClure Ave
Frisco Church Rd.
Frisco Springs Rd
Major Water Utility Campus
Frisco Church Rd
Nail Ave
Bellview Rd
N Goad Springs Rd
Oakwood St
Robinson Ave
N Bloomington St
N Dixieland St
E Monroe Ave
Ladelle Rd.
Spring Creek Rd
Goad Springs Rd
S Dixieland St
S Bloomington St
S Lincoln St
Jane Pl
Old Wire Rd
Mains Rd.
Ervin McGarrah
Puppy Creek Rd
E. Brown Rd.
W Apple Blossom Ave
E Apple Blossom Ave
Graham Rd
SH 71B
Arkansas Missouri RR
US 412 Preferred Alignment
NELSON HOLLOW BRANCH
Plate 4-1
City of Lowell, Arkansas
Master Street Plan
Adopted on May 4, 2004
N
1000 0 1000 2000 3000 4000 Feet
Dunkin Sefko & Associates, Inc.
Urban Planning Consultants Dallas, Texas
Date: May 4, 2004

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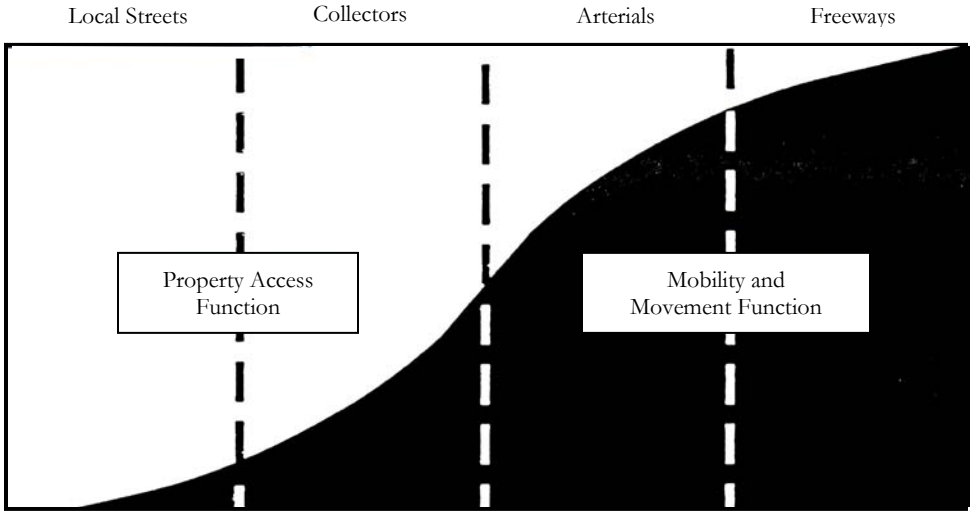


Illustration 4-1
FUNCTIONAL CLASSIFICATION SYSTEM

Freeways

Freeways can be described as high-capacity thoroughfares along which direct access to property is generally minimal or eliminated altogether. Ingress and egress are controlled by access ramps, interchanges and frontage roads; a regional example of this is Interstate Highway 540. Construction and maintenance of freeways is not usually the responsibility of municipalities. The Arkansas State Highway and Transportation Department (AHTD) and federal monies typically fund this type of roadway.

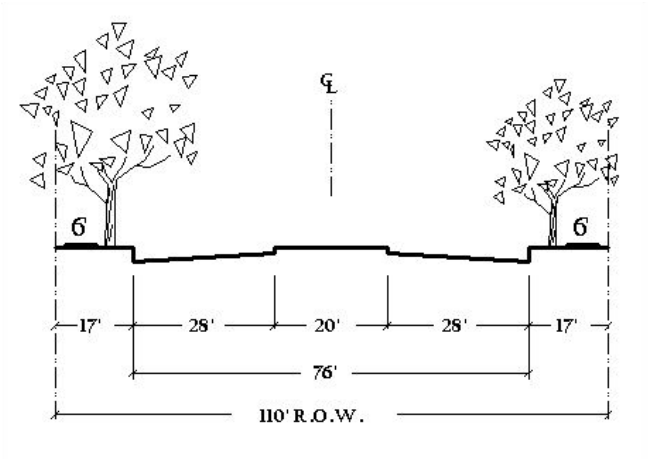


Illustration 4-2
FREEWAY

Interstate Highway 540

Interstate Highway 540 has been, and will continue to be, key to the growth of Lowell. The City should ensure that it is aware of and involved in any discussions or decisions related to improvements to Interstate Highway 540. Especially important for Lowell would be any discussion or decision of widening or increasing access onto and off of the highway.

The fact that Interstate Highway 540 links several northwest Arkansas cities has led to the need for widening and for controlling access along most of the freeway. The City of Lowell needs to make sure it stays informed on, and it needs to get involved in, any discussions of implementing any measures that would further control (i.e., limit) access by decreasing the number of on- and off-ramps, although none are planned at this time. If anything, adding another on-/off-ramp in both directions at Apple Blossom Avenue (which is at least a mile away from other ramps at State Highway 264 and Wagon Wheel Road in Springdale) would be very helpful to Lowell, particularly since Apple Blossom Avenue provides the most direct east/west route for truck traffic to gain access to the freeway. This new on-/off-ramp, combined with improving Apple Blossom to a much better paving standard (to better handle the truck traffic), would provide a much-needed reliever route for State Highway 264, and would help to mitigate the traffic congestion problem at US Highway 71-B and State Highway 264. Continued contact and involvement in planning activities at AHTD, the County, and with surrounding communities will be vital to Lowell's ability to have a voice in such discussions and decision-making processes.

In addition, because Interstate Highway 540 is such a well-traveled, high profile, regional transportation corridor, it is extremely important for the City to ensure that land uses along this freeway reflect positively on Lowell. Aesthetically pleasing restaurant, retail and hospitality uses, in addition to attractively designed business parks and office buildings, would perhaps entice travelers to stop and shop or eat or stay overnight within the City, thereby also leaving their sales tax dollars in Lowell. This important concept is also mentioned in the *Future Land Use Plan*, Chapter 3.

Arterial Roadways

Roadways identified as arterials are designed to convey relatively heavy volumes of traffic. Arterials provide mobility, but because of the speed and volume of traffic, access to properties should be minimal and, therefore, a limited number of intersections and curb cuts (driveway openings) should be permitted along arterial roadways in order to protect the integrity of the high-speed traffic flow. Within the arterial classification, the Plan provides for differentiation between rights-of-way sizes based on two types, principal and minor. The following existing roadways have been classified as principal or minor arterials within this *Master Street Plan*:

- State Highway 264/East Monroe Avenue/Nail Avenue,
- Apple Blossom Avenue/East Brown Road,
- Mills Lane/Garrett Road,

- Future east/west principal arterial that will provide Lake access from North Dixieland Street,
- East Pleasant Grove Road,
- US Highway 71-B/South and North Bloomington Street,
- Old Wire Road,
- South and North Dixieland Street,
- North Goad Springs Road,
- Spring Creek Road/Bellview Road, and
- Future north/south principal arterial that will connect Garrett Road with East Brown Road.

Access onto all arterials and nonresidential collector streets should be controlled and limited by requiring the use of shared driveways (refer to **Illustration 4-3**) and other techniques that minimize disturbance of free-flow traffic on the roadway.

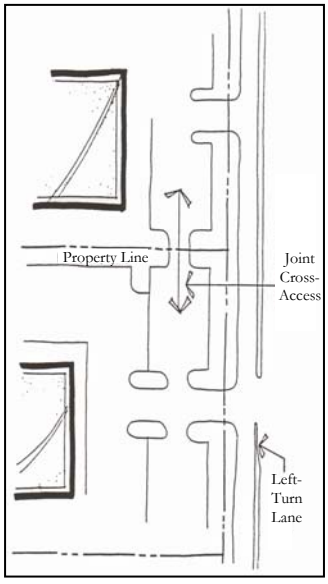


Illustration 4-3
SHARED DRIVEWAY ACCESS RECOMMENDED FOR ARTERIAL AND COLLECTOR STREETS

Type "A" - Principal Arterial

Equipped to serve up to 12,200 to 14,800 vehicles daily, the Type "A" principal arterial (see **Illustration 4-4**) consists of four 12-foot travel lanes within 100 feet of right-of-way. No on-street parking should be permitted on this type of thoroughfare.

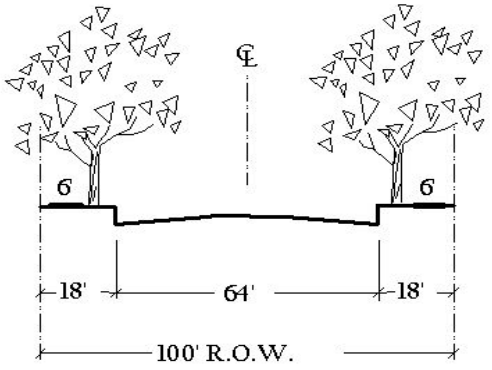


Illustration 4-4
TYPE "A" PRINCIPAL ARTERIAL

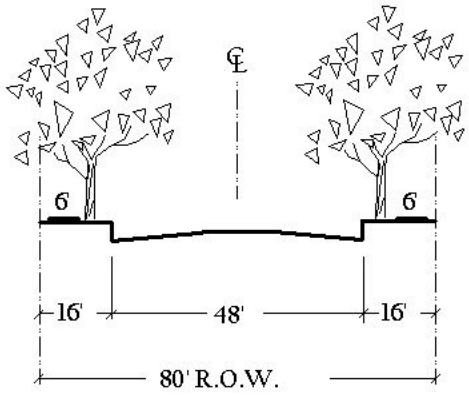


Illustration 4-5
TYPE "B" MINOR ARTERIAL

Type "B" - Minor Arterial

The Type "B" minor arterial is capable of carrying up to 4,000 to 6,000 vehicles per day. It consists of four 11-foot travel lanes within 80 feet of right-of-way. **Illustration 4-5** shows the cross-section for Type "B" minor arterials.

Collector Streets

Collector streets are generally designed to distribute traffic from local access streets and funnel it to arterial roadways (i.e., from residential developments to major arterials). Collectors should provide more access to adjacent land uses than do arterials, but in nonresidential areas access should still be controlled through the use of shared driveways (refer to **Illustration 4-3**) and other techniques that minimize disturbance of the free-flow of traffic. This type of roadway should provide an equal amount of mobility and access to land uses. Neighborhoods should be developed between arterials and traversed by collector streets in the future so that traffic may be collected and distributed outward from residential areas. In addition, good subdivision design should orient residences to local streets, not onto collector streets (i.e., the City should minimize the number of lots that front onto collector streets, particularly front-entry lots). The following existing roadways have been classified as nonresidential or residential collectors within this *Master Street Plan*:

- Ladelle Road,
- Oakwood Drive,
- Dogwood Drive/Cross Hollow Road,
- Gate Lane/Stoney Point Road,
- Portions of Frisco Cemetery Road,
- Ervin McGarrah Road,
- Frisco Church Road,
- McClure Avenue,
- Robinson Avenue,
- Southern portion of Goad Springs Road,
- Puppy Creek Road,
- Interstate Highway 540 frontage roads (where applicable),
- Concord Street,
- South and North Lincoln Street (the southern portion of Lincoln Street may need to be upgraded to a minor arterial to better accommodate heavy truck traffic from the light industrial area in the future),
- Honeysuckle Street, and
- Primrose Road.

Two types of collector street sections, nonresidential and residential, are recommended within this *Master Street Plan*. The following discussion describes these street sections and when each should be used.

Type "C" Nonresidential Collector

Type "C" nonresidential collector streets are low- to moderate-volume roadways whose primary purpose is to collect traffic from smaller streets within a predominantly nonresidential area, and to convey it to the nearest principal or minor arterial. The Type "C" nonresidential collector street has 65 feet of right-of-way with 41 feet of undivided paving. **Illustration 4-6** shows a cross-section for Type "C" nonresidential collectors. It should be noted that this cross-section is a "hybrid" between the size and configuration of a minor arterial and a residential collector, and it should be used in nonresidential areas that will not experience extremely heavy traffic flows but where more pavement width is needed such as to serve large truck traffic in a commercial or light industrial area. As Lowell continues to experience growth, this right-of-way width will not be adequate as an arterial, but it should be adequate to channel traffic out of commercial areas and onto a major arterial.

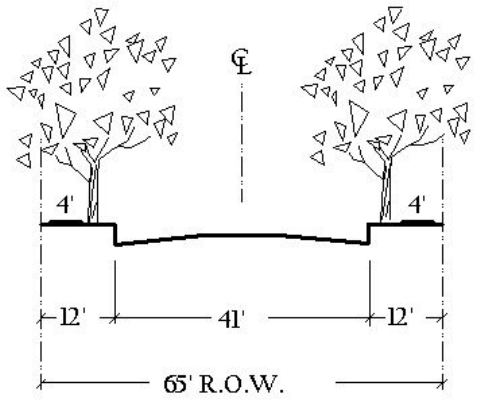


Illustration 4-6
TYPE "C" NONRESIDENTIAL COLLECTOR

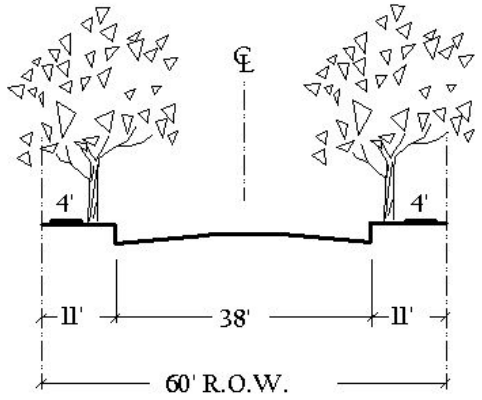


Illustration 4-7
TYPE "D" RESIDENTIAL COLLECTOR

Type "D" Residential Collector

The Type "D" residential collector street is a low- to moderate-volume roadway whose primary purpose is to collect traffic from smaller residential streets within a predominantly residential area, and to convey it to the nearest principal or minor arterial. The average daily traffic volume for this type of street should not generally exceed 4,000 trips per day. The Type "D" residential collector street has 60 feet of right-of-way with 38 feet of undivided paving, which would allow for two-way residential traffic even if vehicles are parked on one, or even both, sides of the roadway. **Illustration 4-7** shows a cross-section for Type "D" residential collectors. The width of this cross-section is consistent with Lowell's current requirement for a collector street (60-foot right-of-way).

Type "E" Residential Street

Local residential streets provide the greatest access to adjacent properties, but they do not function well in terms of mobility and efficiency, especially where on-street parking exists. Due to the fact that local streets are generally constructed within residential areas, safety is an important issue. To ensure that these roadways are not used a great deal for mobility purposes, and to ensure that their ability to provide access safely is preserved, local streets should be configured to discourage through traffic movements by using offset intersections and by designing residential subdivisions using curvilinear, discontinuous, and/or looped street designs. Structured to convey lighter traffic volumes (generally less than 1,000 vehicles per day), the Type "E" local residential street consists of two travel lanes on 30 feet of paving, within a total right-of-way of 50 feet, as **Illustration 4-8** shows. This recommended cross section is consistent with the City's current residential street requirement. It should be noted that no roadways of this type have been shown on **Plate 4-1**, due to the fact that these roadways are typically part of residential developments and are typically constructed by the developers of those subdivisions.

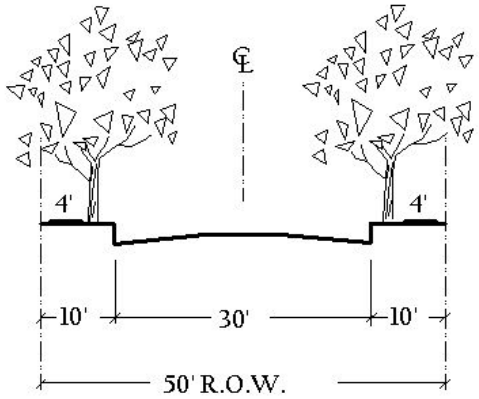


Illustration 4-8
TYPE "E" RESIDENTIAL STREET

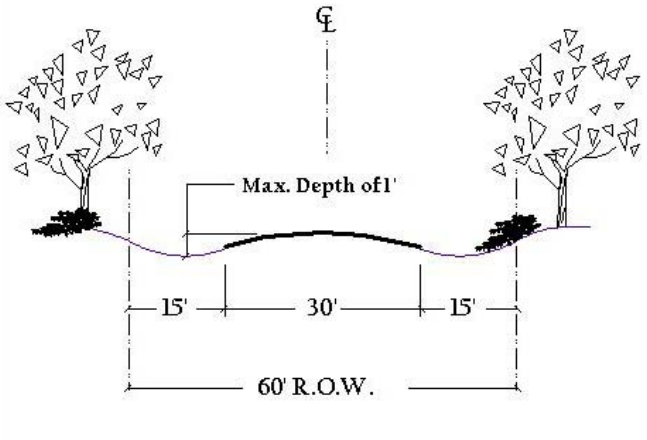


Illustration 4-9
TYPE "E-1" RURAL RESIDENTIAL STREET

In low density, semi-rural residential areas (22,000 square-foot minimum lot sizes or larger), the residential street paving may be constructed using a more rural street section (see **Illustration 4-9**). The design standard for such Type "E-1" rural streets (60-foot right-of-way) should still be the City's residential street standard (30-foot paving), but the street section could be constructed without curb and gutter, utilizing open drainage swales on each side instead. The need for sidewalks for pedestrian circulation and safety should be seriously considered prior to approving a subdivision utilizing the Type "E-1" street standard, since it is difficult to install sidewalks where open drainage swales are present.

Thoroughfare Planning Issues

A number of issues were considered in the process of developing a *Master Street Plan* for Lowell. First, the Plan must be compatible with the City's *Future Land Use Plan* (Chapter 3) and related growth and development considerations. Second, it must address the integrity of existing residential and nonresidential areas; the Plan must balance functions of the thoroughfare system through efficient movement of traffic, and facilitate access requirements. It must also consider alignments and right-of-way issues. Third, the *Master Street Plan* must also incorporate realistic recommendations within the context of budgeting constraints. Finally, the *Master Street Plan* should be reflective of applicable regional plans, such as the *2025 Regional Transportation Plan for Metropolitan Northwest Arkansas*, prepared by the Northwest Arkansas Regional Planning Commission (in cooperation with the Arkansas State Highway and Transportation Department and the United State Department of Transportation) in February 2001. This plan should remain the guiding force and the primary decision-making tool for Lowell with respect to the timing and funding of improvements to Lowell's major roadways, and is therefore incorporated into this *Master Street Plan* by reference.

Compatibility with the Future Land Use Plan

Land use and roadway planning are closely linked; just as inappropriate land uses can reduce the effectiveness of adjacent roadways, poorly planned roadways can reduce the viability of adjacent land uses. Inappropriate zoning, various types of development activity, the existence of older roadways that now carry higher traffic volumes than originally intended, and continually changing traffic patterns can have negative impacts on the City's roadway system. As previously mentioned, Lowell should ensure that adequate access (driveway) spacing standards are implemented for land uses located on arterial and nonresidential collector streets in order to promote a smooth flow of traffic, and to minimize the impact of individual developments on the safe and efficient function of these roads. The different mobility and access needs of residential and nonresidential land uses are recognized within the *Future Land Use Plan*, and have resulted in the various land use location recommendations therein.

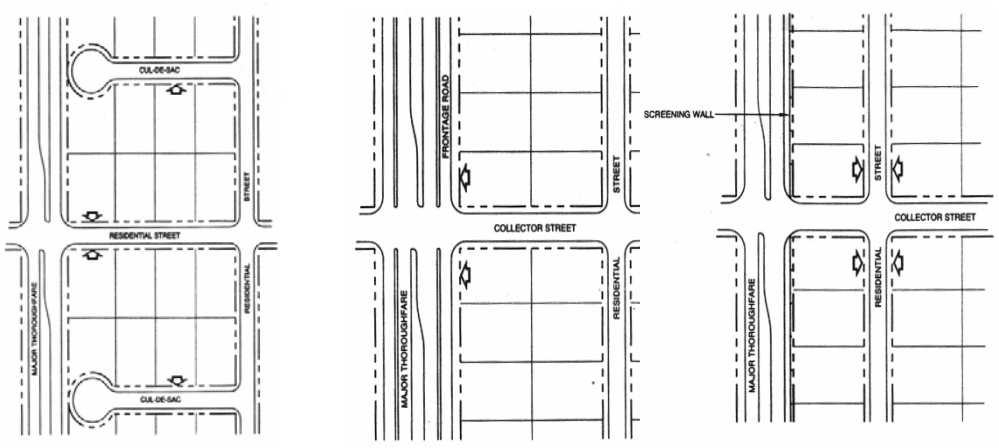
Future Single-Family Development Along Major Roadways

Major roadways, including both principal and minor arterials as well as through region-serving collector streets (such as those in the City's eastern planning area, including Frisco Church Road, Frisco Cemetery Road, Gate Lane/Stoney Point Road, and Ervin McGarrah Road), typically attract large volumes of traffic; therefore, it is not desirable to front residential lots directly onto these streets. Fronting residences on major roadways will reduce efficiency of the roads due to the number of driveways, mailbox stops and cross-streets, as well as the possibility of on-street parking in front of the houses. Also, whenever a subdivision's layout produces lots fronting onto a major

roadway, there is ultimately pressure in the future to convert these residences into "strip" retail or commercial land uses (this is due to the fact that, as traffic increases on the fronting street, the homes become less and less desirable as a place to live, raise children, etc.). Obviously, the frontage of all major roadways within the community cannot be used for retail and commercial purposes. Usually the majority of retail uses in a community will be along and adjacent to major arterials with high traffic counts and visibility. Even the long-term demand for retail development within Lowell will not justify the allocation of retail land uses to other areas along all major roadways.

The general appearance and image of residential neighborhoods and the community as a whole are also greatly affected by the orientation of development along the major streets. Fronting lots onto major roadways tends to present aesthetic and noise problems for area residents due to large amounts of traffic passing in front of homes. Of equal importance is the safety factor when area residents must back their vehicles into the arterial to leave their homes. No space is typically provided along arterial streets for parking, which is needed to serve the needs of visitors, deliveries, etc.

The practice of backing residential lots onto major streets produces other problems, including unsightly appearances; rear entry garages and backyard areas become exposed to the roadway and are generally not as well maintained as front or side yards. A preferred approach is to side residential lots onto major roads since this allows more visibility into the neighborhood with views of pleasing elements like home fronts and landscaped yards. This tactic also enhances neighborhood security and minimizes negative traffic impacts upon the surrounding major roadways.



Lots Siding on Major Roadway and Fronting on Cul-de-Sac or Side Street

Lots Fronting on Major Roadway – Not Recommended

Lots Rearing on Major Roadway

Illustration 4-10
SINGLE-FAMILY RESIDENTIAL LOT LAYOUTS ADJACENT TO MAJOR ROADWAYS

The careful treatment of subdivision design adjacent to future major roadways will contribute to the safety and capacity of the road system. It will also help to protect adjacent residential properties from the negative influences of these roadways, and from pressures to convert residences into incompatible nonresidential land uses in the future. **Illustration 4-10** shows residential lot

arrangements that are designed to protect not only the residences, but the capacity and function of the adjacent roadways. One method of accomplishing a desirable major road/residential relationship is to design residential lots fronting onto a parallel residential street and backing onto the major thoroughfare. By restricting access and by providing a screened alley or suitable landscape or other screening treatment along the rear of the lots backing onto the major roadway, it is possible to avoid problems that would be created if all abutting lots had direct access onto the major road. Intersections of collector streets or other subordinate roadways should be spaced as shown on the *Master Street Plan* (see **Plate 4-1**). Street spacing such as this will result in an interior subdivision design permitting access to the neighborhood, but discouraging the movement of cut-through traffic within a residential area.

Other alternatives for arranging lots in relation to a major roadway are also shown in **Illustration 4-10**. In one example, a frontage road has been added, providing access to lots which front or side onto the major thoroughfare. This technique, however, requires additional right-of-way and the installation of more curb and street pavement than the first method. The cost of developing the frontage roads and providing additional street rights-of-way is obviously higher than other techniques, but frontage roads allow access points to be more widely spaced apart, and they provide excellent buffers to heavy traffic movements along the major road. This technique is also desirable in areas where business or industrial developments are located adjacent to high capacity roadways.

Illustration 4-11 shows how short, "open" ended cul-de-sac streets may be used to create lots that do not have direct access onto a major road. These techniques offer practical and economical ways to protect the capacity of the major roadway, and they also help to preserve the integrity of the residential neighborhood. This method of siding residential lots generally does not require screening walls; therefore, it is one of the more desirable options utilized by developers in subdivision design. Cul-de-sac streets can be efficient methods in developing land, and they are very desirable for residents due to minimal traffic flows. The use of cul-de-sac streets also tends to yield an efficient lot layout design and to maximize thoroughfare capacity and efficiency. However, when using these subdivision design techniques, care must be taken to ensure that the "unintended consequence" of designing looped streets and cul-de-sacs from a major roadway does not inadvertently result in isolated neighborhood

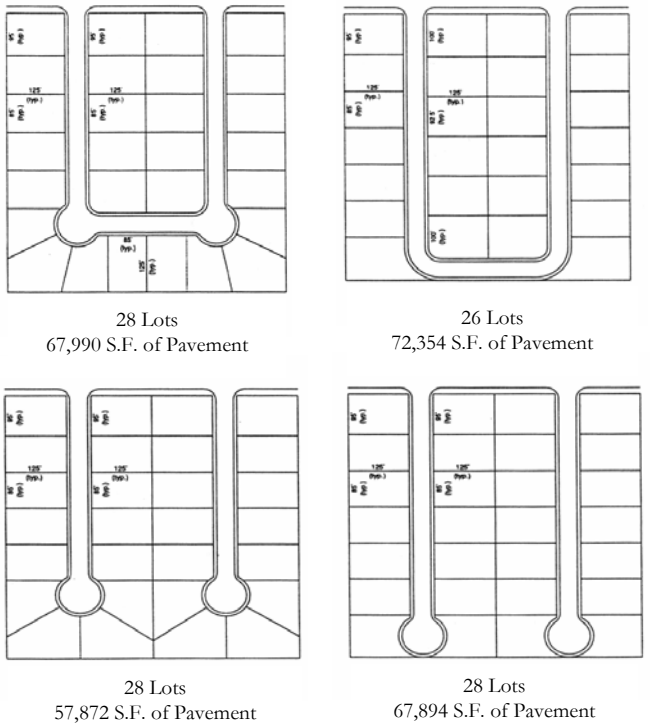


Illustration 4-11
COMPARISON OF "PAVEMENT" VS. "LOT YIELD"
FOR SUGGESTED RESIDENTIAL STREET
CONFIGURATIONS ADJACENT TO MAJOR ROADWAYS

"islands" that are segregated from other adjacent residential subdivisions – this would be very antisocial in that the residents of these pockets will feel disconnected, and perhaps even left out, of social interaction that should occur between neighbors, resulting in loss of "sense of community and belonging" within the neighborhood. Connecting streets should always be provided to adjacent properties that will also eventually be developed for residential uses such that neighborhoods are connected together both physically and spiritually.

Illustration 4-11 also shows comparative examples of pavement versus lot yield for several suggested residential street configurations adjacent to major roadways.

Considerations for the New School Site

There is a new Rogers School District site that has been shown on the Future Land Use Plan map, **Plate 3-1**. The site is located on the east side of Concord Street, approximately midway between East Pleasant Grove Road and Robinson Avenue. Traffic circulation around school sites is extremely important, but is often challenging due to the major influx of traffic when drop-off and pick-up times occur. On the *Master Street Plan* map, a new arterial roadway has been shown on the north side of the school site – the School District is paving a road in that location all the way between Concord Street out to US Highway 71-B, but the paving width will probably not be adequate for the road to serve and a principal arterial in the long term so the City may have to widen the street in the future (it may also be necessary to acquire additional right-of-way along the north side of the road, along which several large residential lots are located – this process should be initiated as soon as possible before land prices go up any more in that area).

One of the main concerns about how school sites are designed is that on-site vehicle stacking space will not be adequate (school districts often minimize the amount of paving as much as possible due to cost concerns), and traffic will be forced to stack out onto the public roadway at the prime drop-off and pick-up times. If school sites are not carefully planned, this inevitably becomes a problem, and a serious challenge, that the City will have to address after the school site is finished and open for classes.

Another issue in relation to development of school sites is pedestrian access. It would be mutually beneficial for the School District and for the City of Lowell to ensure that there is safe, adequate pedestrian access (i.e., sidewalks and bike trails) within and around any school site. Children and parents who live in the vicinity should be able to get to and from the school by walking or bicycling from their homes. In addition, park facilities that will be needed in the vicinity should be carefully planned next to school sites such that the park and school might be able to share recreational and other facilities, such as parking, practice fields, playground equipment, etc. The City and the School District should work very closely together in the planning and coordination of park and school facilities for the mutual benefit of both.

Funding Thoroughfare System Improvements

Building and maintaining an efficient roadway network requires significant investment of local resources. Careful planning is needed to ensure that Lowell makes the most cost-effective investments in its street network. Funding is usually based upon general obligation bonds or the general fund budgeting process. The City should also coordinate efforts with the Arkansas State Highway and Transportation Department, the Northwest Arkansas Regional Planning Commission, and other transportation-related agencies in order to maximize the potential for shared financing. Developer participation in roadway construction is also available to the City through the adoption of various capital recovery programs (such as impact fees), through development regulations that require construction of essential public facilities (such as perimeter roads) along with new developments, and through tools such as traffic impact analysis as a way to demonstrate adequacy of the roadway network before and after construction.

Traffic Impact Analysis

A Traffic Impact Analysis (TIA) is one way to objectively evaluate the impact of large developments on a city's existing roadway system. The City should consider incorporating a TIA requirement into its Land Development Code. Any development that generates more than 1,000 trips per day should be required to prepare a detailed TIA to ensure that any impact on the roadway system can be minimized, and to reveal what, if any, roadway improvements will be necessary in order for the road system in the vicinity to operate at a level of service (LOS) of "C" or better (using typical transportation engineering methodologies), even during peak traffic periods.

In Conclusion

Implementation of the *Master Street Plan* will require consistent administration by the City, and is specifically addressed within the *Implementation Strategies*, Chapter 7. Design and technical standards should continue to be contained within the City's adopted Land Development Code. It should be noted that proposed changes and recommendations for future roadways are predicated upon the goals and objectives formulated during the comprehensive planning process and contained within Chapter 2 of this Comprehensive Plan.

Lowell's *Master Street Plan* policies that have been recommended herein are summarized within **Table 4-1**.

Table 4-1
MASTER STREET PLAN RECOMMENDATIONS
City of Lowell, Arkansas

Utilize the roadway cross-sections within the *Master Street Plan* as a guide for roadway geometric design, and for requiring right-of-way dedication and/or roadway improvements as part of the development approval process. Integrate these cross-sections into the City's street engineering design standards.
Construct divided roadways (principal and minor arterials) with raised medians, in lieu of flush/painted medians, for traffic and pedestrian safety as well as for aesthetics.
Ensure that adequate access spacing standards, including shared driveways and minimum spacing between driveway openings, are implemented for land uses located on arterial and nonresidential collector streets in order to promote smooth flow of traffic, and to minimize the impact of individual developments on the function, efficiency and safety of the City's roadways.
Contact, and work diligently with, the Arkansas State Highway and Transportation Department (AHTD) regarding the feasibility of adding new on- and off-ramps from Interstate Highway 540 to Apple Blossom Avenue, and explore possible funding sources for this worthwhile regional transportation improvement. Simultaneously, explore possible funding sources for improving Apple Blossom Avenue from Interstate Highway 540 to Old Wire Road such that this roadway can better accommodate heavier truck traffic should the new on- and off-ramps be deemed feasible.
Arrange future residential lots such that they do not front onto major roadways; utilize the guidelines herein to ensure that such lots are properly placed in relation to these roadways, and that isolated residential "pockets" do not result due to inadequate street connections into adjoining properties.
Ensure that future school sites are designed such that they allow for adequate automobile circulation and on-site stacking, and also for adequate pedestrian circulation both on-site as well as getting to the school sites. Work closely with the School District to coordinate planning of school and park sites, such that joint-use opportunities are taken advantage of at every opportunity.
Investigate different funding mechanisms to ensure that future roadways can accommodate population growth.

Table 4-1, Continued
MASTER STREET PLAN RECOMMENDATIONS
City of Lowell, Arkansas

Consider incorporating a TIA requirement into the City's Land Development Code such that developments generating 1,000 or more trips per day must prepare a detailed TIA to ascertain whether or not the existing roaday system will be able to operate at a level of service (LOS) of "C" or better, even during peak traffic flow periods.
Continue to be aware of, and involved in, the roadway planning activities of the Northwest Arkansas Regional Planning Commission, and ensure that regional transportation, mobility and roadway improvement plans are reflected in local transportation planning efforts.
Utilize any available funding mechanisms, including developer participation, to widen and improve Lowell roadways at every possible opportunity.
Require sidewalks along all City streets, and ensure that the design of all sidewalks and associated barrier-free ramps are compliant with ADA requirements.

Note: Not in any order of priority.
Source: City of Lowell's *Master Street Plan.*

City of Lowell

COMPREHENSIVE PLAN 2025

Chapter 5:
The Park & Community Facilities Plan

Introduction

A vital component of an urban area is the space devoted to satisfying active and passive community recreational needs. The quantity of this space and its distribution within the population, generally indicates how well the community is meeting the leisure needs of its citizens. Furthermore, all these spaces collectively are considered to be elements that enhance and contribute to the quality of life found in the community. Fredrick Law Olmstead, the man considered to be the father of landscape architecture in this country, advocated the concept that parks, recreational areas, and public open spaces should be "planned as integrated systems so that the components could function in conjunction with one another."[5-1]

Illustration 5-1
FRANKLIN PARK IN BOSTON, MA
Designed by Fredrick Law Olmstead

Similarly, the provision of adequate public facilities and services (such as law enforcement, fire suppression, emergency medical services, solid waste disposal, roadway maintenance, animal control, administrative services, etc.) is also a primary quality of life indicator for municipalities across Arkansas. The type and quality of public facilities and services available to the residents of Lowell is, and will continue to be, an important factor influencing the desirability of Lowell as a place to live. The future availability of public facilities and services within the City is also likely to affect the potential for development in certain portions of the City and its ultimate planning area. It should be noted that public buildings that house the various governmental and service functions of a municipality are generally of two types: (1) those requiring a nearly central or common location and that serve the entire municipal area, and (2) those serving segments of the community on a "service area" basis. Lowell's City Hall is an example of a governmental building that serves the entire community, while a fire station represents a public building that has a service area relationship with the community.

The purpose of this element of the Comprehensive Plan is to examine and analyze existing parks and community facilities, to identify issues related to present and future community needs, and to make recommendations on how the City's parks and community facilities can be integrated into a cohesive system. The parks portion of this Chapter evaluates existing facilities, establishes general facility criteria and standards, provides a generalized comparative analysis of Lowell's park system to accepted park standards, and identifies park-related issues that Lowell will need to address in the future. The community facilities portion of this Chapter is intended to provide an assessment of Lowell's other community facilities that exist today to serve the population, and to provide

[5-1] Alexander Garvin, December 2000, "Parks, Recreation, and Open Space: A Twenty-First Century Agenda," *American Planning Association*, *Planning Advisory Service Report Number 497/498*, p.13.

generalized recommendations on what facilities may be needed to serve the City's residents in the future.

Park Types and Recommended Standards

In order to provide the parks, recreational, and open space facilities needed by the City's residents, a set of standards and design criteria should be followed. The National Recreation and Park Association (NRPA) has developed such standards for parks, recreation and open space development, which are intended to guide communities in establishing a hierarchy of park areas. The general standard established by the NRPA for park acreage per 1,000 people is approximately 10 acres, or 1.0 acre for every 100 people. As mentioned in the *Baseline Analysis* (refer to **Table 1-12**), Lowell currently has approximately 10.7 acres of parkland, including McClure Park and Lowell Park (the playground/park site that is adjacent to Lowell Elementary School on the north side of McClure Avenue. This amount of park acreage calculates into only approximately 0.2 acre of parkland for every 100 people currently within the City. Specific park and open space needs for Lowell will be discussed later in this Chapter.

The following sections describe a commonly used classification system that follows guidelines similar to those set forth by the National Recreation and Park Association (NRPA). The park areas discussed are defined by 1) the various types of activities that are to be furnished, and 2) their type, size, and service area. Each park type is discussed below in order to:

(1) Identify the function of each park type;
(2) Identify the recreational activities generally associated with each park type; and
(3) Define the general service area and the physical relationship of each type of park to the population residing within its service area.

These various park types will be used within this *Parks & Community Facilities Plan* as a basis for Lowell's park system.

Illustration 5-2
EXAMPLE OF A MINI-PARK

Mini-Park

A mini-park is a small area generally used as a children's playground or as a passive or aesthetic area by senior citizens. Mini-parks are designed to serve a very small population area, and they should be owned and maintained by the neighborhood's homeowners' association (HOA) since these parks are generally only adequate as a play space for the children of people who live in that particular subdivision. These parks normally serve a very localized

population base of 500 to 1,000 persons, and although they range in size, they are typically only about one acre or less in size. The primary function and use of this type of park is to provide recreational space for preschool-age children and elementary school-age children in very close proximity to their homes (preferably walking distance). Where apartment communities are proposed, it is appropriate for mini-parks to be incorporated into the design of those complexes and for them to be maintained by the apartment complex for the exclusive use of residents in the complex.

The future development of mini-parks should only be private in nature (i.e., not undertaken nor subsidized by the City), and the ownership and maintenance should be through a private entity as well, such as a homeowners' association. These parks are generally not conducive to ownership by municipalities primarily due to the high cost of maintaining them, and due to the fact that they are really usable only by the immediate neighborhood and not generally useful to the community at-large. They are also often comprised of little leftover or remnant land parcels, sometimes in inaccessible areas, that cannot be developed as viable residential lots so developers try to convince the City to accept them as "parks" even though the parcels will not really suffice for any type of "community good" open space/park purpose. There are currently two parks in Lowell that could be classified as mini-parks – these are small (only about 50 feet wide by about 100 feet deep) remnant parcels in the Southfork subdivision that were supposed to be the rights-of-way for future street extensions that will not be constructed after all due to their inability to cross the railroad tracks. Small parcels like this should not be accepted by the City as park sites in the future.

Neighborhood Park

The neighborhood park, sometimes referred to as a playground, is deemed to be one of the most important features of a well-planned park system, and is often considered to be one of the major cohesive elements in residential neighborhood design. Its primary function is the provision of recreational space for the neighborhood that surrounds it.

When it is possible to combine an elementary school with this type of park, the two features further enhance the identity of the neighborhood by providing a central location for recreation and education (plus the obvious advantages of sharing parking, playground equipment, ball fields, etc.), and by providing a significant open space feature within the neighborhood. A neighborhood park, similar to an elementary school, should be located near the center of the neighborhood, and it should have a service area of approximately one-half mile to three-fourths of a mile. Safe and convenient pedestrian access (via sidewalks and/or off-street hike-and-bike trails) is important to a neighborhood park location. Neighborhood parks, just like all other park facilities, are for the most part shown linked together by the City's planned community-wide open space/greenbelt trail system described later in this Chapter. Generally, the location of a neighborhood park should not be adjacent to a heavily traveled major roadway, but it should be located along at least one residential collector street (preferably two or more collector street frontages) so park users can park along the street while using the park facilities.

Facilities normally provided at a neighborhood park consist of the following:

- Playground equipment for small children,
- Multiple-purpose, surfaced play area (for basketball, roller hockey, volleyball, badminton, tennis, playing when the playground is muddy, etc.),
- Multi-purpose play field area (non-lighted) for games such as softball, football and soccer (primarily for informal play and scrimmages, not necessarily for league or organized games on a regular basis),
- Pavilion(s) with picnic tables and grills,
- Restrooms (optional),
- Drinking fountains, and
- Passive area(s) with landscaping, trees and natural elements.

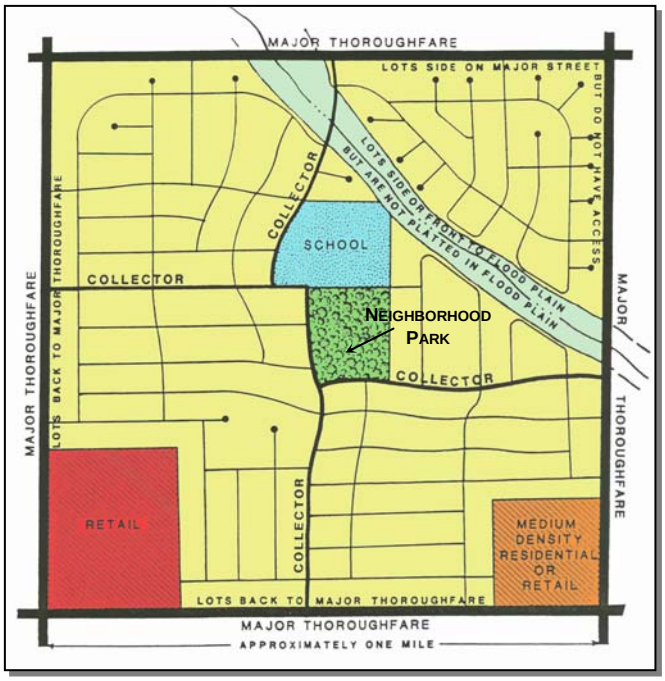
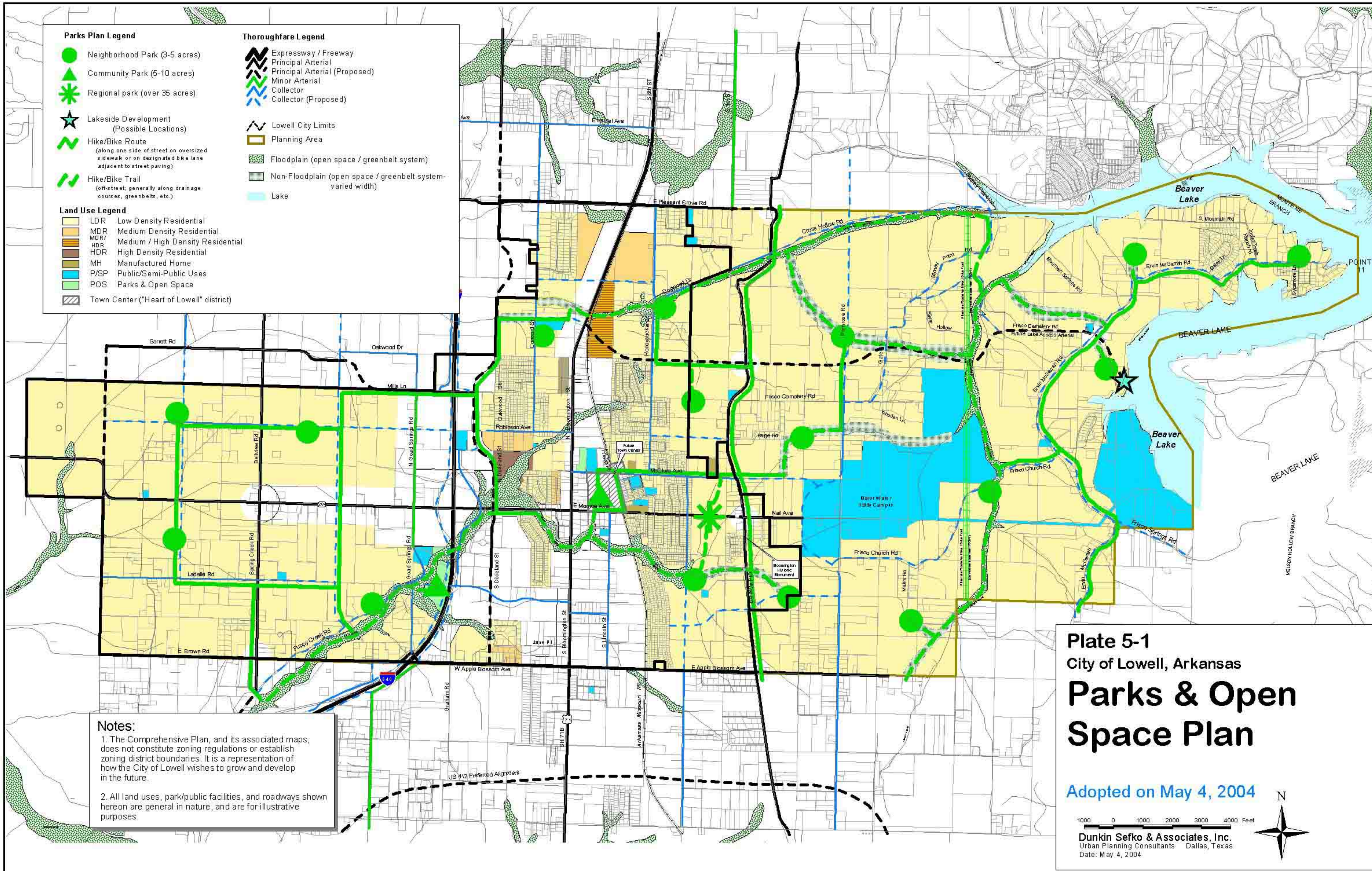


Illustration 5-3
EXAMPLE OF A NEIGHBORHOOD PARK AND ITS RECOMMENDED RELATIONSHIP TO THE SURROUNDING NEIGHBORHOOD

Neighborhood parks are designed to serve a small population area. An appropriate standard in relation to size and population for this type of park is 2.5 acres per 1,000 persons. These parks normally serve a population base of 1,000 to 2,500 persons, and they generally range in size from three to five acres in small towns like Lowell. Technically, both of the City's current parks, Lowell Park and McClure Park, would be considered neighborhood parks from a size standpoint, but these two parks (in addition to school campuses that presently exist in Lowell) have been serving the entire community's park needs up to the time that this Plan was written. Future residential subdivisions should be required to dedicate land for additional neighborhood park sites in the general locations shown on the *Parks & Open Space Plan* map (**Plate 5-1**).

Community Park

A community park is larger than a neighborhood park, and is oriented toward providing active recreational facilities for all age groups and for a larger population area, such as the community as a whole. They should be conveniently accessible by automobile, located on or very close to an arterial roadway. They should also have safe and convenient pedestrian access (via sidewalks and/or hike/bike trails), along with provisions for off-street parking. Community parks, just like all other park facilities, are shown linked together by the City's planned community-wide open space/greenbelt trail system described later in this Chapter.


Parks Plan Legend
Neighborhood Park (3-5 acres)
Community Park (5-10 acres)
Regional park (over 35 acres)
Lakeside Development (Possible Locations)
Hike/Bike Route (along one side of street on oversized sidewalk or on designated bike lane adjacent to street paving)
Hike/Bike Trail (off-street; generally along drainage courses, greenbelts, etc.)
Thoroughfare Legend
Expressway / Freeway
Principal Arterial
Principal Arterial (Proposed)
Minor Arterial
Collector
Collector (Proposed)
Lowell City Limits
Planning Area
Floodplain (open space / greenbelt system)
Non-Floodplain (open space / greenbelt system- varied width)
Lake
Land Use Legend
LDR Low Density Residential
MDR Medium Density Residential
MDR/HDR Medium / High Density Residential
HDR High Density Residential
MH Manufactured Home
P/SP Public/Semi-Public Uses
POS Parks & Open Space
Town Center ("Heart of Lowell" district)
Garrett Rd
Oakwood Dr
Mills Ln
E Pleasant Grove Rd
Cross Hollow Rd
Frisco Cemetery Rd
Paige Rd
McClure Ave
E Monroe Ave
Nail Ave
Frisco Church Rd
Ladelle Rd.
E. Brown Rd.
Puppy Creek Rd
W Apple Blossom Ave
E Apple Blossom Ave
US 412 Preferred Alignment
Future Town Center
Bloomington Historic Monument
Major Water Utility Campus
Beaver Lake
BEAVER LAKE
MONTE NE BRANCH
POINT 11
NELSON HOLLOW BRANCH
Notes:
1. The Comprehensive Plan, and its associated maps, does not constitute zoning regulations or establish zoning district boundaries. It is a representation of how the City of Lowell wishes to grow and develop in the future.
2. All land uses, park/public facilities, and roadways shown hereon are general in nature, and are for illustrative purposes.
Plate 5-1
City of Lowell, Arkansas
Parks & Open Space Plan
Adopted on May 4, 2004
1000 0 1000 2000 3000 4000 Feet
Dunkin Sefko & Associates, Inc.
Urban Planning Consultants Dallas, Texas
Date: May 4, 2004
N

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Facilities typically provided in this type of park generally include:

- Athletic fields (at least some should be lighted) for games such as softball, baseball, football and soccer (for practice as well as for league and organized play on a regular basis),
- Multi-purpose, surfaced play area (for basketball, roller hockey, volleyball, badminton, etc.),
- Community building (such as a recreation center with gymnasium, senior or youth activities building, fitness center, etc.),
- Tennis courts (at least some should be lighted),
- Playground equipment for small children,
- Pavilion(s) with picnic tables and grills,
- Restrooms,
- Drinking fountains,
- Passive area(s) for picnicking with landscaping, trees and natural elements, and
- Other special recreational areas/facilities such as Frisbee golf (if space is available).

The typical service area of a community park is one-half to two miles, and a location adjacent to, or as a part of, a middle, junior high or high school campus (if one is planned for the area) is considered desirable (for the obvious advantages of sharing parking, playground equipment, ball fields, etc.). An appropriate standard for these parks in relation to service area and population is five acres per 1,000 persons. These parks normally serve a population base of 2,500 to 5,000 persons, and they generally range in size from five to ten acres in small towns like Lowell. Although they are both smaller than the size standard for community parks, Lowell Park and McClure Park (in addition to school campuses that presently exist in Lowell) have been serving the community park needs for Lowell up to the time that this Plan was written so they were cumulatively included in the existing park and open space inventory as "community" parks (see **Table 5-1**) rather than as "neighborhood" parks.

A few years ago, the City purchased a 15-acre land parcel on the east side of South Lincoln Street, just south of the creek, thinking that this would be a good site for a public park facility. Since that time, the vicinity has been deemed more appropriate for commercial and light industrial uses, so the appropriateness of this site as a public park is now questionable. Consideration should be given to "swapping" this land parcel for a parcel that would be more appropriate for public park use. For the time being, and until this situation can be studied in more detail, this City-owned parcel should remain as "passive open space", pending a final decision on how (or if) it should be used as park land.

Regional Parks

Areas that are 35 or more acres in size, which provide both passive and active recreational facilities, are considered to be regional-scale parks. These parks should have facilities that serve all age groups, and they often have athletic fields. It is desirable that a balance of active and passive recreational areas and facilities be provided in a regional park, including those for picnicking, fishing, water-oriented activities, hiking and enjoyment of natural areas. These parks are often lighted, and they should have multi-purpose facilities wherever possible (such as multi-purpose paved areas, fields that can serve several purposes, etc.). They should be conveniently accessible by automobile, located on an arterial roadway on at least one side. They should also have safe and convenient pedestrian access (via sidewalks and/or hike/bike trails), along with provisions for significant amounts of off-street parking (particularly if equipped with large numbers of soccer, baseball or other sports fields). Regional parks, just like all other park facilities, are shown linked together by the City's planned community-wide open space/greenbelt trail system described later in this Chapter.

Facilities typically provided in this type of park generally include:

- Athletic fields (at least some should be lighted) for games such as softball, baseball, football and soccer (mostly for league and organized play on a regular basis),
- Multi-purpose, surfaced play areas (for basketball, roller hockey, volleyball, badminton, etc.),
- Recreation center with gymnasia and other sports facilities,
- Tennis courts (at least some should be lighted),
- Playground equipment for small children,
- Pavilion(s) with picnic tables and grills,
- Restrooms,
- Drinking fountains,
- Passive area(s) for picnicking with landscaping, trees and natural elements, and
- Other special recreational areas/facilities such as Frisbee golf (if space is available).

The typical service area of a regional park is larger than two miles, and a location adjacent to, or as a part of, junior high or high school campus (if one is planned for the area) is considered desirable (for the obvious advantages of sharing parking, playground equipment, ball fields, etc.). An appropriate standard for these parks in relation to service area and population is 7.5 acres per 1,000 persons. These parks normally serve a population base of 5,000 to 10,000 persons, and they are generally larger than 35 acres in size in small towns like Lowell. There were no regional-scale parks within Lowell or its planning area at the time that this Plan was written; however, citizens of Lowell may have "unofficial" access to several regional parks located in the nearby cities of Rogers, Bentonville and/or Springdale.

Parkways & Ornamental Areas

Plazas, street medians, scenic drives and grounds of public buildings and similar facilities are important aspects of the overall park system and should receive careful attention for their development and maintenance. They are also often a pleasant, passive place that may be included as part of a comprehensive hike/bike trail system. There are no recognized parkways or ornamental areas within Lowell at this time.

Illustration 5-4
EXAMPLE OF A PARKWAY

Illustration 5-5
EXAMPLE OF AN ORNAMENTAL AREA

Open Space Preserves and Greenbelts

These areas should generally be located within Lowell's extensive flood plain areas (see **Plate 5-1**), and along corridors where green space should be used to link special areas together (such as the City's network of neighborhood and community parks, as in green "pearls on a necklace"; other special areas such as the "Heart of Lowell" Town Center, the proposed Lakeside Development area, public schools, major shopping areas, etc.). These areas should take advantage of (and preserve, wherever possible) topography, special natural features and mature stands of tree cover, and they should generally be left undisturbed and in their natural state, to the greatest extent possible, to reinforce Arkansas's mantra as the "Natural State". Although some forms of active recreation can be accommodated within limited portions of these areas, they are primarily intended for passive recreational use and enjoyment of nature. Constructing hike/bike trails through these areas should be done in the least obtrusive way possible to avoid upsetting the delicate balance of these special ecosystems.

Future Park Acreage Needs

As previously mentioned, the general park-acreage-to-population standard set by the National Recreation and Park Association (NRPA) is approximately 1.0 acre per 100 people, or 10 acres per 1,000 persons. NRPA-recommended park acreage standards for each type of park that should be generally found in a community's park system are summarized in **Table 5-1**, and the table shows that the City's existing park acreage (approximately 10.7 acres) is well below NRPA standards for the City's existing population. Calculations for future park needs based upon the projected populations of 8,500 persons in the year 2010, and of 18,900 persons in the year 2025, are also included in the table below.

Table 5-1
EXISTING PARK AND OPEN SPACE INVENTORY
City of Lowell, Arkansas

PARK TYPE	Recommended Standard Acres/1,000 Persons	Existing Park Acreage	Recommended Acreage for		
			5,013 Persons (Current)	8,500 Persons in 2010[1]	18,900 Persons in 2025[1]
Neighborhood	2.0	0.0	10.0	17.0	37.8
Community Park	3.0	10.7	15.0	25.5	56.7
Large/Regional	5.0	0.0	25.0	42.5	94.5
Open Space Preserves And Greenbelts *(not included in Total Acreage)*	Variable	Variable	Variable	Variable	Variable
Total Acreage/ 1,000 Persons	**10.0 Acres**	**10.7 Acres**	**50.0 Acres**	**85.0 Acres**	**189.0 Acres**

[1] Based on a projected population growth of 5.5%; refer to Table 3-2 within the *Future Land Use Plan* chapter.

Source: NRPA

As previously stated, and as can be seen in the table above, the City is currently well below NRPA standards for its existing population. The park and open space system recommended herein should help Lowell meet the amounts of acreage for each park type as shown in **Table 5-1** if recommendations in this Plan are proactively and consistently implemented. It is important to note, however, that in recent years, park and recreation experts have begun to rely more heavily on facility-based park planning (such as the number of ball fields and swimming pools needed for a population) than on acreage-based. It is recommended that Lowell concentrate on providing citizens with quality facilities rather than on simply ensuring that the proper amount of acreage is available.

Specific Recommendations for Lowell's Park & Open Space System

Immediate and longer range needs for Lowell's park and open space system were identified in a number of different ways. Interviews were conducted with several members of the City's staff, as well as with several community leaders. The Comprehensive Plan Steering Committee also provided extensive input and numerous ideas and thoughts on what should be shown on the Plan to meet the community's growing park and recreational needs as it grows over time. Goals and objectives related to parks and recreation were established during the comprehensive planning process, and were included in Chapter 2 of this Plan. The recommendations contained in the following sections are intended to incorporate all of the input received related to park and recreational needs of the community both presently, as well as in the future.

Illustration 5-6
EXAMPLE OF A TRAIL

Hike-and-Bike Trails

Both City staff members and Comprehensive Plan Steering Committee members expressed a strong interest in, and need for, hike-and-bike trails within Lowell. The creation and integration of a comprehensive trail system in Lowell is strongly recommended by this *Parks & Community Facilities Plan*. There are numerous reasons that such a system would be a positive element for the City. First, an integrated, cohesive hike-and-bike trail system would set Lowell apart from other communities in the area; no other city in the vicinity has such a system. Second, trails are a recreation amenity that can be used and enjoyed by all age groups, which is not true of a playground or ballpark; all citizens, young and old, benefit from the availability of trails. And third, it has been proven in recent studies that property values are positively affected by being in proximity to a trail; people are generally willing to pay an increased amount for such a residence. A recent survey[5-2] supports this:

> *Urban trails are regarded as an amenity that helps to attract buyers and to sell property. For residents of single-family homes adjacent to a trail:*
>
> - *29 percent believed that the existence of the trail would increase the selling price of their home (and 43 percent said it would have no effect);*

[5-2] Suzanne Webel, "Trail Effects on Neighborhoods: Home Value, Safety, Quality of Life", *Boulder Area Trails Coalition*, Resources and Library Directory; ADDRESS: http://americantrails.org/resources/adjacent/sumadjacent.html.

- *57 percent of the residents felt that the trail would make the home easier to sell (with 36 percent saying no effect);*
- *57 percent of these residents had lived in their homes prior to construction of the trail;*
- *29 percent of those surveyed were positively influenced by the trail in their decision to buy the home.*
- *Results were similarly positive for residents who lived near but not adjacent to the trail.*

A Community-Wide Trail System

Pedestrian access between parks, public spaces, and neighborhoods can enhance citizens' "sense of community" – they also provide a unique cohesiveness among and between neighborhoods that is otherwise difficult to achieve in our automobile-oriented society. This increased accessibility and connectivity can also provide a means for residents to move through the community and meet their neighbors, visit a park, or conduct personal business, and can provide a safe way to increase children's physical fitness and overall mobility. A functional network of hike-and-bike trails will help Lowell maintain a unique, community atmosphere as the City grows to its build-out population.

The general concepts in laying out a trail system is to incorporate as many positive features of an area as possible, and to link special areas of a community together (such as the City's future network of neighborhood and community parks, the "Heart of Lowell" Town Center, Lakeside Development area, major shopping and employment areas, public schools, etc.). **Plate 5-1** shows the recommended hike-and-bike trail system with heavy green dashed lines (hike-and-bike trails that are generally off-street along drainage courses or greenbelts) and with lighter, chopped green lines (hike-and-bike routes that are generally along one side of a street on an oversized sidewalk or on a designated bike lane adjacent to street paving).

Elements to consider when making decisions regarding trail locations include the following[5-3]:

- Natural openings and scenic views,
- Light brush cover (i.e., not too thickly overgrown with brush),
- Access to and view of creeks, waterways and the Lake,
- Safe crossings of roads, the railroad and waterways,
- Good access to and from strategically placed public parking areas,
- Minimal conflict with existing land uses,
- Designated bike lanes or trails (off-street routes), and
- Feasibility of obtaining access along trail routes (right-of-way, easements, etc.).

Each of these elements was carefully considered when determining the most appropriate layout for Lowell's comprehensive trail system. The trails were placed adjacent to established creeks and integrated into known floodplain areas wherever possible (rather than across privately-owned property). Existing land uses were a primary consideration as well; in order to minimize conflicts as much as possible, the trail was placed along existing roadways in already developed areas and where

[5-3] Some of these considerations are from "Trail Design," from the University of Florida School of Forest Resources and Conservation; ADDRESS: http://www.sfrc.ufl.edu/Extension/ pubtxt/for5b.htm.

necessary due to lack of available floodplains or possible greenbelts. It should be noted that participation in the hike-and-bike trail system in already developed areas will most likely be the responsibility of the City of Lowell, but developer participation can be solicited in areas that are currently vacant as they develop over time.

The primary concept for the recommended comprehensive trail system was to provide for continuous pedestrian and bicycle linkages and connections throughout the City. The need for continuity in Lowell's trial system was a suggestion made numerous times by Comprehensive Plan Steering Committee members, and this Plan supports that suggestion. Consideration was also given to providing important linkages between the following important features within the City:

- The "Heart of Lowell" Town Center,
- Lowell Park,
- McClure Park,
- Lowell Elementary School and the new school site on Concord Street,
- Future major shopping and business areas,
- The recommended community park site off South Goad Springs Road,
- The recommended regional park site west of Old Wire Road in the north central portion of the City,
- The Links apartment community,
- The historic Butterfield Stagecoach route along/near Old Wire Road, and the City's historic Bloomington Historic Monument on Old Wire Road a little south of Nail Avenue,
- Points along the shores of Beaver Lake, including the proposed Lakeside Development area, and
- Recommended future neighborhood park areas.

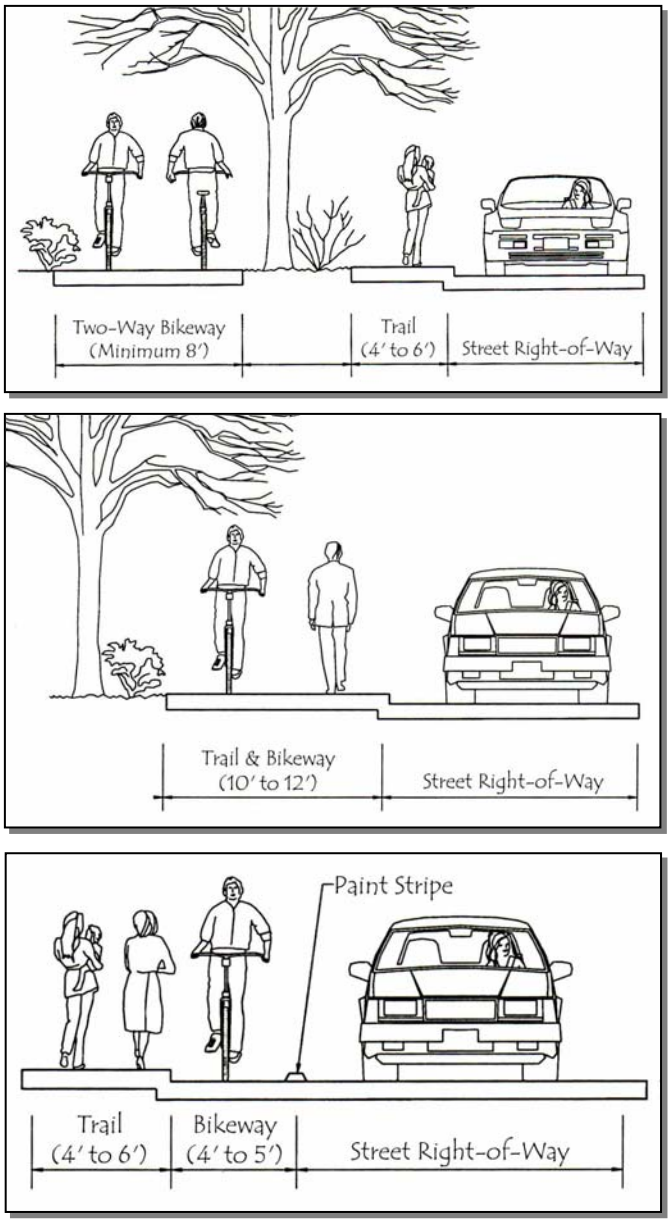


Illustration 5-7
WAYS TO INTEGRATE A HIKE/BIKE TRAIL ALONG A ROADWAY

The City should incorporate into its Land Development Code a requirement that all new residential subdivisions should provide land dedication and improvements for pedestrian- and bicycle

appropriate points of access onto the recommended greenbelt and hike-bike-trail system (as shown on **Plate 5-1**) if they are immediately adjacent to the trail system. For subdivisions that are not immediately adjacent to the trail system as shown on **Plate 5-1**, and that are within reasonable proximity (within 1,000 feet) to the system, the Land Development Code should require that sufficient funds be placed in an escrow account for eventual construction of those segment(s) of the trail that will have to be installed later on (after necessary easements, rights-of-way or land dedications have been acquired, and when it makes logical, and economic, sense to complete those connections into the hike-and-bike trail system). These escrow funds should, of course, be returned to the developers who paid them if the trail connection improvements are not constructed by the City within the time frames set forth in the Land Development Code, or if these improvements are constructed by others (e.g., developers of other adjacent subdivisions, other entities, etc.).

In addition to the need for continuity, it is also reasonable to assume that people using this trail system may want to have a choice between taking a long length of trail or a short length of trail and, therefore, several cross-connections have been recommended at strategic points within the City, as well.

The Rogers-Lowell Area Chamber of Commerce recently formed a new "Greenway & Trails Committee" to give further study and to make more detailed recommendations on establishing a region-serving, comprehensive hike/bike trail system for northwest Arkansas. Lowell should get very involved in this new Committee, and should do everything possible to support its goals.

Trail Types

Two types of hike-and-bike "trails" are used in Lowell's comprehensive trail system. The first is what is usually thought of as a "trail", which is typically located away from streets, generally along a linear greenbelt of varied width (from 20 feet to 50 feet) and/or a drainageway or within a floodplain area. They generally feature an oversized 6- to 8-foot wide trail which may either be paved for all types of personal mobility modes such as bicycling or roller-blading, or they may be a less "urbanized" surface such as crushed stone which would be more conducive to mountain bike, hiking and equestrian use. Off-street hike-and-bike trails should travel through areas that are away from traffic and that are noted for their natural beauty, tree cover, scenic qualities, etc. The second type of "trail" used herein is referred to as a hike-and-bike "route", which is used only where traditional trails cannot go (due to existing developed areas, or to topological or environmental constraints). These are typically placed along one side of a street (see *Illustration 5-7*), either on an oversized 6- to 8-foot sidewalk (need only pave a sidewalk along one side of the street, except on a principal or minor arterial) that is separated from the roadway pavement, or on a specially designated bike lane which is flush with the roadway pavement (generally either striped-off or buttoned-off to help "separate" bicycle traffic from car traffic). Separate sidewalks on both sides of the roadway should be required if the latter method is used (pedestrian traffic should not use the flush bike lane in the street).

Trail Width & Integration

Hike-and-bike trails should be no less than eight feet wide, and should be ten feet wide wherever possible and economically feasible. In areas where the trail system must, by necessity, follow a "route" adjacent to a roadway, the City will have to decide the best way in which to establish these in various locations. *Illustration 5-7* shows three ways this can be effectively done. Lowell will have opportunities in the future as development occurs to integrate the trail system in other ways, perhaps along a creek or through a private mini-park. However, opportunities within existing neighborhoods and along floodplains where lots are backing onto the creek are more limited, and the illustration is intended to show how existing neighborhoods can be included within the overall trail system, depending primarily upon the amount of right-of-way available. It is also recommended that the City work with residents and neighborhood associations to gain public input on how citizens would like this trail construction to be accomplished, timing issues, etc.

Trail Construction Materials

The materials used for trail construction vary widely, however some are better than others in terms of maintenance and impact on the pedestrian; construction materials also must meet the requirements of the Americans With Disabilities Act (ADA), which is another important consideration. For the most part, concrete material should be used for construction of trails in Lowell. Although there are concerns about the adverse impacts that long-term walking and running on concrete can have on users, other materials sometimes used for trail construction have long-term maintenance and cost issues. For instance, trails constructed with asphalt or with crushed granite are initially less expensive than concrete, but such trails have proven to be high in maintenance costs, and the hard surface of both types of trails are quite similar to concrete in terms of their impact on users. Another material that could be used is rubberized material (usually red or black in color), which is low-impact on users and requires only slightly more maintenance than concrete, but is cost-prohibitive for most small towns. In addition, although rubberized material is ADA-compliant, it is also generally not as good as concrete in accommodating high psi devices such as in-line skates, skateboards, etc. For Lowell, considering the multi-modal access that these trails are intended to support and considering long-term durability issues, it is recommended that the City use concrete material for its hike-and-bike trail system whenever possible.

The Rails-With-Trails Concept

The *Rails-With-Trails* idea evolved from the concept of *Rails-to-Trails*, which is based on converting abandoned or unused rail corridors into public trails. The difference between these concepts is that *Rails-With-Trails* utilizes unused portions of railroad rights-of-way along railroad lines that are still active. Lowell currently has an active rail line that is located east of and generally parallel to US Highway 71-B that is not anticipated to be abandoned in the foreseeable future; therefore, the *rails-with-trails* concept is more applicable for the City of Lowell.

Illustration 5-8
A RAIL-WITH-TRAIL PROJECT
York County Heritage Rail Trail in Pennsylvania

In considering the *rails-with-trails* concept, the most common concern is that establishing a trail within an existing railroad right-of-way, in close proximity to an active railroad, could be a dangerous proposition. In fact, the Rails-to-Trails Conservancy maintains that "rails-with-trails can be safer than trails next to roads"[5-4]. Some factors to give special attention to in terms of safety are as follows[5-5]:

- Ensuring adequate distance between the trail and the railroad track – the average separation distance is approximately 33 feet;
- Constructing and maintaining a barrier and/or grade separation between the trail and the railroad track;
- Designing safe railroad crossings, either at-grade or otherwise; and
- Establishing adequate trail-user signage.

No significant portions of the recommended trail system for Lowell are shown along the railroad (see **Plate 5-1**), but the *rails-with-trails* concept is included herein as a possible alternative location for segments of the trail system in this portion of the City that might have to be revised in the future due to unforeseen constraints or cost issues.

[5-4] "Rails-With-Trails: Design, Management, and Operating Characteristics of 61 Trails Along Active Rail Lines," from the Rails-to-Trails Conservancy, November 2000, p.7.
[5-5] Ibid.

Trail Cost

The cost of establishing lengths of trail can vary, depending on the construction materials, local labor costs, the cost of clearing land, and other related items. The width of the trail is also a primary consideration when assessing the cost of establishing a trail. The recommendation herein has been for the City to construct paved trails of at least eight feet, with ten feet being to the preferred width. **Table 5-2** contains information on estimated costs for one-mile lengths of both an eight-foot wide and a ten-foot wide paved trail. It should be noted that these cost estimates do not include land acquisition costs and are based on a material cost of four dollars per square foot. Possible funding sources have been outlined to give the City ideas on how to fund the construction of trails. As may be expected, it is less expensive to construct an eight-foot wide trail, but a ten-foot wide trail would allow for a greater number of users for anticipated high-traffic trail segments, and would likely be more beneficial to the City in the long-term in those areas.

Table 5-2
ESTIMATED TRAIL CONSTRUCTION COSTS – ONE-MILE LENGTHS
City of Lowell, Arkansas

FACILITY-TYPE	ESTIMATED COST	POSSIBLE FUNDING SOURCES
8-Foot Wide, Paved	$170,000	Arkansas Parks & Wildlife Department Grants, Donations, Park Dedication Ordinance Fees, Bonds, Tax Revenue
10-Foot Wide, Paved	$210,000	

NOTE: Based on $4 per square foot of trail; estimated cost does not include land acquisition.

Source: Dunkin, Sims, Stoffels, Inc.

Neighborhood Parks

As previously mentioned, Lowell Park and McClure Park are both considered community parks since they have historically fulfilled all of the City's park needs, but they are really only the scale of neighborhood parks due to their size of approximately 3.5 acres and 4 acres, respectively. These parks are for the use and enjoyment of all community residents, and they currently have the following amenities:

Lowell Park (approx. 3.5 acres)	McClure Park (approx. 4.0 acres)
1 picnic pavilion	1 picnic pavilion
1 tennis court	1 sand volleyball court
1 walking track	1 sand box (clover-shaped)

1 softball/baseball field (lighted)	1 softball/baseball field (lighted)
1 basketball court	1 ball-dispensing play apparatus
2 swingsets (4 swings on each)	1 swingset (4 swings)
4 picnic tables	10 picnic tables
8 trash receptacles	2 trash receptacles
1 monkey bars	4 slides (one has monkey bars)
4 benches	3 benches
1 merry-go-round	3 teeter-totters
1 concession stand	4 barbecue grills
1 parking lot	1 parking lot

Integration of both of these parks into the envisioned "Heart of Lowell" Town Center would not only increase the use of these parks by citizens, but they would be a valuable greenspace component of the Town Center area. These two parks are also integrated into the proposed comprehensive trail system, which would further increase usage. Additional shade structures should be placed in close proximity to the small children play areas for parents to watch their children under, which would further add to the enjoyment and usage of the play areas.

Additional Neighborhood Parks

The City should incorporate into its Land Development Code a requirement that all new residential subdivisions should dedicate (in fee simple), through platting, a reasonable amount of land for a neighborhood park if such is shown in that area on the *Parks & Open Space Plan* (see **Plate 5-1**), and they should be required to provided convenient pedestrian and maintenance access into these park sites. For subdivisions that are not located where a neighborhood park is deemed appropriate on **Plate 5-1**, the Land Development Code should require that a reasonable amount of money (based on a per-dwelling-unit-basis, as determined by the City in a "park fees in lieu of land dedication" ordinance) be placed in an escrow account for eventual land acquisition and construction of park improvements in that geographic area that may need to be acquired/installed later on (when it makes logical, and economic, sense to acquire that park land and construct park improvements therein). These escrow funds should, of course, be returned to the developers who paid them if they are not spent by the City for park land acquisition and park improvement purposes within the time frames set forth in the Land Development Code, or if these improvements are constructed by others (e.g., developers of other adjacent subdivisions, other entities, etc.).

Community & Regional Parks

Two community park sites are shown on **Plate 5-1**. One of these is in the proposed "Heart of Lowell" Town Center and will be comprised of the McClure Park/Lowell Park combination (with some added improvements), and the other site is shown on South Goad Springs Road where an isolated land parcel exists beyond the main access point into the Sycamore Trace subdivision and where Puppy Creek forks. This site, which is currently only accessible via a dirt road, is quite isolated from other surrounding land uses, and the very limited access into the site (and poor visibility from Interstate Highway 540) make it less than desirable for other land uses such as retail or business park. Acquisition of this land parcel should be undertaken in the very near future before land prices increase to unattainable levels. This park site has been integrated into the recommended City-wide hike-and-bike trail system via trails along Puppy Creek. There are several other elements that local citizens have expressed interest in having at this community park site as well, including additional fields for organized sports practice and play, such as softball/baseball and soccer fields. Development of this community park site should be very sensitive to the presence of natural springs (if they still exist).

One site has been shown on the Parks & Open Space Plan for a large, multi-purpose regional park. This site is planned to be located somewhere west of Old Wire Road, and possibly straddling the future extension of East Monroe Avenue as it travels eastward toward Old Wire Road. This regional park site should have a major sports field complex, as well as other facilities and amenities typical to a large region-serving park. This park site has also been integrated into the recommended City-wide hike-and-bike trail system via a route through the adjacent future residential neighborhoods. Acquisition of this land parcel should also be undertaken in the very near future before land prices increase to unattainable levels.

Other Community Facilities

The City of Lowell currently employs 43 employees, not including volunteers, and has three primary buildings that house the various necessary local government operations. These buildings are the City Administration Building, the Fire/Police Facility (includes central fire station), and the Streets/Parks/Animal Control Facility. The City also has another public facility, the Lowell Historical Museum, which is mostly being used for the storage of historical information and artifacts that are pertinent to the town's history. In addition to the central fire station, the City of Lowell's Fire Department also operates from a second sub-station in Bethel Heights. **Table 5-3** shows the current information on each of these public buildings, including their respective functions, locations, building sizes (and year constructed, if known), and number of employees per facility.

The public services currently provided by the City are very efficiently accommodated in the three primary City facilities (and the fire sub-station in Bethel Heights), but the City will need to consider expansion of its respective buildings as its population continues to grow. The following sections briefly describe these various public service facilities and respective personnel[5-6]. Related recommendations based on the projected population of the City in 2025 of 18,900 people (refer to the *Future Land Use Plan*) are included following the discussion of existing conditions.

[5-6] Information obtained from interviews with City personnel and from the City of Lowell's web site. Information on some departments and numbers of employees was unavailable.

Table 5-3
EXISTING PUBLIC FACILITIES
City of Lowell, Arkansas

Building	Purpose	Location	Square Feet	# of Employees
City Administration Building	City Administrative Offices, Council Chambers, Mayor's Office, City Court, Street Department, Finance Department, Planning/Engineering Department, Custodial Staff	214 North Lincoln Street	7,440 square feet	11 employees (Mayor, Administrative Secretary, Finance Director, City Clerk, City Engineer, Planning Secretary, Engineering Technician, Court Clerk, Deputy Court Clerk, Bookkeeper/Clerk, Custodian)
Fire/Police Facility	Central Fire Station, all Fire Operations (includes all fire services – fire protection, EMS, Search & Rescue, HazMat, Extrication), all Police Operations	**Fire:** 220/221 North Lincoln Street **Police:** 224 North Lincoln Street	**Fire:** 6,075 square feet **Office Area:** 2,616 square feet **Apparatus Bays:** 3,459 square feet	Fire: 8 full-time firefighters, plus 11 volunteer firefighters and 2 administrative personnel Police: 11 sworn officers, and 1 administrative personnel
Street Department/ Parks/Animal Control Facility	Offices for Personnel, Storage for equipment and materials, Animal Detainment	Behind the Fire/Police Facility	1,271 square feet	5 employees
Lowell Historical Museum	Exhibits, Display and Storage of Historical Information & Artifacts	304 Jackson Place (northwest corner of Jackson Place and McClure Avenue)	2,346 square feet	Staffed by volunteers (no regular employees)
Fire Station 42 (in Bethel Heights)	Cooperative Fire Station with Bethel Heights, Fire Department's Meeting Facility	675 Sunrise Drive (in Bethel Heights)	4,330 square feet	(see central Fire Station)
TOTAL EMPLOYEES				43 total employees

Source: City of Lowell Staff, City of Lowell Web Site.

City Administration Building

The City's Administration Building (constructed in 1998) is located at 214 North Lincoln Street (within the future "Heart of Lowell" Town Center), and contains approximately 7,440 square feet of building space. This building contains most of the City's administrative departments (see **Table 5-3**), which are currently comprised of eleven City employees. In addition to basic administrative functions, this facility accommodates all City Council, Committee and Commission meetings, in addition to City Court dockets and numerous other civic group meetings.

Assuming that the City's current Administration Building is of adequate size to reasonably accommodate the community's administrative functions, **Table 5-4** shows a proportional analysis of future spatial needs for Administration Building (i.e., "City Hall") functions as the City eventually grows to its anticipated population of 18,900 persons in the year 2025. Given the current ratio of City administrative personnel to the population of Lowell, approximately 42 administrative employees would be needed to serve a population of 18,900 people in the year 2025. If all the services that are currently provided within the City Administration Building continue to be housed therein, it can be assumed that by the year 2025, Lowell would require a City Administration Building that could accommodate 42 employees.

Table 5-4
CITY ADMINISTRATION BUILDING:
EMPLOYEES & SQUARE FEET FOR 2025
City of Lowell, Arkansas

BASIS & NEEDS	2000	2025
Population	5,013 people	18,900 people
Employees	11 employees	42 employees
Square Feet	7,440 square feet	28,000 square feet

Source: Dunkin, Sefko & Associates, Inc. & the City of Lowell

The Lowell City Hall is currently approximately 7,440 square feet in building area. In order to maintain the present ratio in terms of number of employees to number of square feet, a building nearly four times as large as the existing City Administration Building would be needed; specifically, a building that is approximately 28,000 square feet in building area. As the City proceeds with planning the future "Heart of Lowell" Town Center, it should take an aggressive approach in reserving and acquiring adequate land area for future expansion of the City Administration Building to accommodate future population growth.

The City should conduct a detailed space study of the City Administration facility in the next two years, depending on population growth, due to the fact that additional square footage is likely going to be needed in the not very distant future. If population growth occurs at a higher rate than has been projected within this Comprehensive Plan, this recommendation may need to be implemented at an earlier date.

The Fire Department

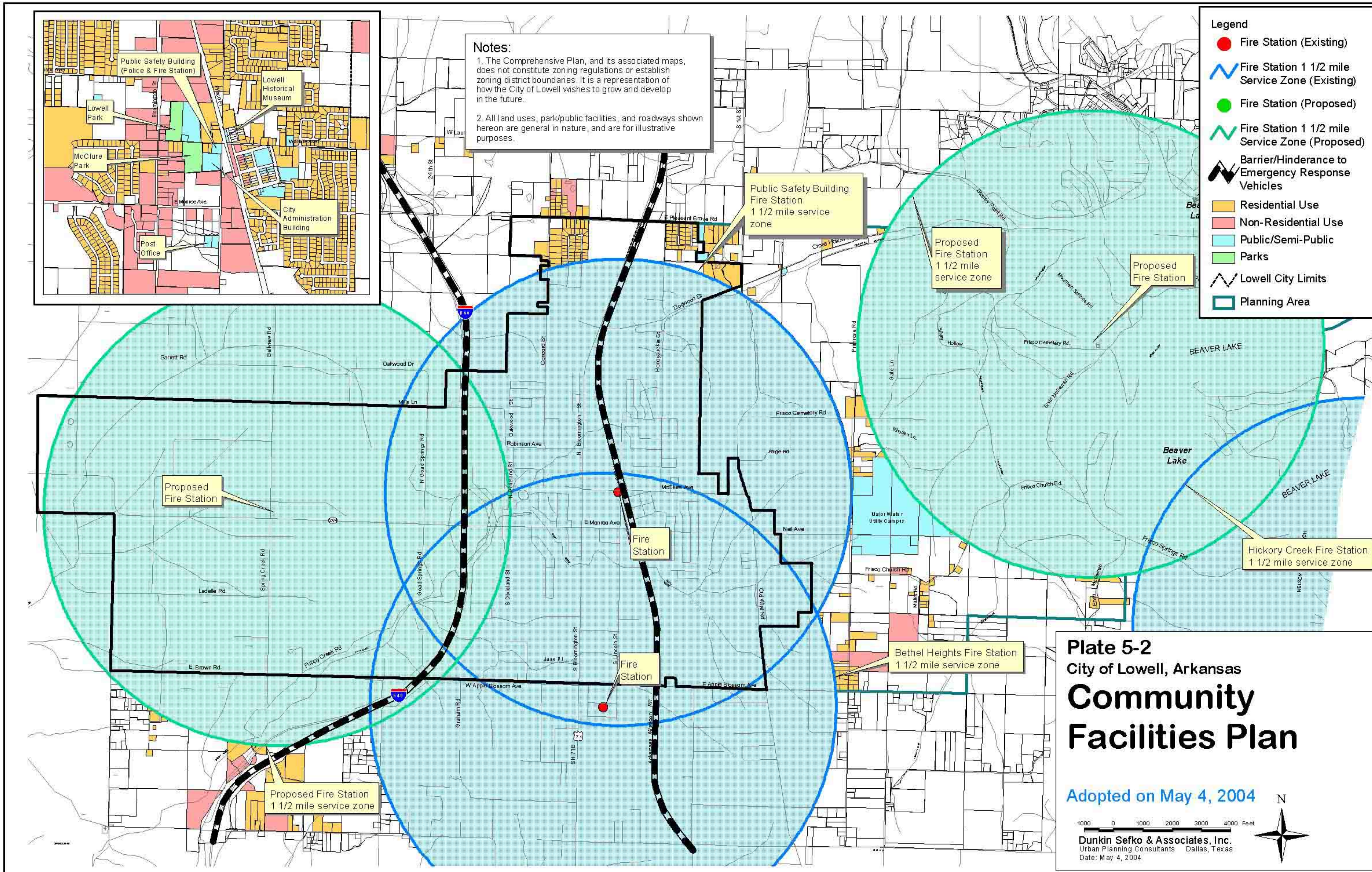
Lowell's Fire Department presently operates out of two fire stations. The City's main/central fire station (Station 41 – built in 1973) is located adjacent to the City Administration Building at 220 North Lincoln Street in the future "Heart of Lowell" Town Center area. This main fire facility, which is shared with the City's police department operations, has approximately 12,150 square feet of building area, of which approximately 6,075 square feet is devoted to fire personnel operations, and approximately 3,459 square feet is devoted to seven apparatus bays (stacked two deep). This main station is manned from 8:00a.m. until 5:00p.m. by eight full-time firefighters (including supervisory personnel) and two administrative personnel, and it is manned after hours by volunteer firefighters.

The other fire station utilized by the Lowell Fire Department (Station 42 – built in 2002) is located at 675 Sunrise Drive in the City of Bethel Heights. This station was built by Bethel Heights in a cooperative arrangement with the City of Lowell wherein Bethel Heights paid to construct the station, and the City of Lowell agreed to provide most of the manpower for it. It is approximately 4,330 square feet in building area with two apparatus bays and a large meeting room that the Fire Department uses for regular departmental meetings. This station is manned from 8:00a.m. until 5:00p.m. by two full-time Lowell firefighters (including supervisory personnel), and it is manned after hours by volunteer firefighters.

In addition to the two above-described fire stations, the far easternmost portions of Lowell, which are currently very sparsely populated, also benefit from the presence of the fire station in Hickory Creek, which will respond to incidents in those rural areas adjacent to Beaver Lake. The Hickory Creek Fire Station, in addition to typical fire suppression apparatus, has the ability to perform aquatic rescues on the lake with its specialized fire boat.

What is most important in terms of fire protection service is the service-area of fire stations to the geographic area of the community. **Plate 5-2** shows Lowell's fire stations and their respective relationships to the City based upon the accepted fire service radius area of approximately 1.5 miles. The two existing fire stations encompass most of the City's current corporate limits within their 1.5-mile radii. However, two other locations for future fire stations will probably be needed to adequately serve the easternmost and westernmost portions of the City's ultimate planning area where the City can still accommodate substantial population growth. It is anticipated that when these outlying areas begin to develop, fire stations will probably be needed in those areas (as shown on **Plate 5-2**) to ensure adequate fire coverage without having to rely too heavily upon neighboring communities for "first response" support. It should be noted that access to the area of the City that lies east of the railroad tracks is constrained (and fire responses are delayed) when frequent trains travel along the tracks. It will therefore be important for the City to ensure that there is adequate thoroughfare access to the east when deciding upon the actual location of this station (see Chapter 4 and **Plate 4-1**, *Master Street Plan*).

The City should consider initiating land acquisition proceedings immediately to secure future fire station sites (ideally, 1.5 to 2 acres in size each) in the City's future westernmost and easternmost areas while land prices are reasonable.


Notes:
1. The Comprehensive Plan, and its associated maps, does not constitute zoning regulations or establish zoning district boundaries. It is a representation of how the City of Lowell wishes to grow and develop in the future.
2. All land uses, park/public facilities, and roadways shown hereon are general in nature, and are for illustrative purposes.
Legend
Fire Station (Existing)
Fire Station 1 1/2 mile Service Zone (Existing)
Fire Station (Proposed)
Fire Station 1 1/2 mile Service Zone (Proposed)
Barrier/Hinderance to Emergency Response Vehicles
Residential Use
Non-Residential Use
Public/Semi-Public
Parks
Lowell City Limits
Planning Area
Public Safety Building (Police & Fire Station)
Lowell Historical Museum
Lowell Park
McClure Park
City Administration Building
Post Office
E Monroe Ave
Public Safety Building Fire Station 1 1/2 mile service zone
Proposed Fire Station 1 1/2 mile service zone
Proposed Fire Station
Fire Station
Hickory Creek Fire Station 1 1/2 mile service zone
Bethel Heights Fire Station 1 1/2 mile service zone
Proposed Fire Station 1 1/2 mile service zone
Beaver Lake
BEAVER LAKE
Major Water Utility Campus
Garrett Rd
Bellview Rd
Oakwood Dr
Mills Ln
N Goad Springs Rd
Goad Springs Rd
Spring Creek Rd
Ladelle Rd.
Puppy Creek Rd
E. Brown Rd.
W Apple Blossom Ave
E Apple Blossom Ave
Graham Rd
SH 71B
S Lincoln St
S Bloomington St
Jane Pl
S Dixieland St
N Dixieland St
Robinson Ave
Oakwood St
N Bloomington St
Concord St
Honeysuckle St
Dogwood Dr
E Pleasant Grove Rd
Cross Hollow
S 1st St
24th St
Primrose Rd
Gate Ln
Frisco Cemetery Rd
Paige Rd
McClure Ave
Nail Ave
Old Wire Rd
Frisco Church Rd
Arkansas Missouri RR
Rhoden Ln.
Silver Hollow
Mountain Springs Rd.
Erwin McGarrah Rd.
Frisco Springs Rd
Frisco Church Rd.
Stoney Point Rd
Plate 5-2
City of Lowell, Arkansas
Community Facilities Plan
Adopted on May 4, 2004
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1000 0 1000 2000 3000 4000 Feet
Dunkin Sefko & Associates, Inc.
Urban Planning Consultants Dallas, Texas
Date: May 4, 2004

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The Police Department

The Lowell Police Station is located at 224 North Lincoln Street in a building that is shared with fire department operations. The central Fire/Police Facility has approximately 2,616 square feet of office space, some of which is utilized by the Police Department which employs a total of 12 people, including 11 sworn officers and one support staff person. The ratio of police officers to population is an important consideration in terms of the overall safety of the local population. An accepted ratio of police officers to population is approximately 1.5 to 1.8 officers per 1,000 people. There are currently 11 sworn police officers within the Lowell Police Department serving a population of 5,013 persons, which equates to a ratio of approximately 2.2 officers for every 1,000 people. This ratio would indicate that the City currently has an adequate number of officers to serve its present population.

Table 5-5 shows a proportional analysis of current and future needs related to the Lowell Police Department. With the projected future population of 18,900 persons, the City of Lowell would need approximately 42 sworn officers (if the City were to maintain its present ratio of 2.2 sworn officers per 1,000 population). Also, in order to maintain a similar ratio of other police personnel to population, the City would need a total of approximately 4 support employees within the Police Department for administrative and record-keeping functions. Therefore, total Police Department personnel would need to be approximately 46 employees. It should be noted, however, that the number of police persons any city needs, including the City of Lowell, should be assessed on the basis of ensuring the public health, safety, and welfare, and not necessarily according to a specified ratio.

Table 5-5
POLICE DEPARTMENT:
OFFICERS & SQUARE FEET FOR 2025
City of Lowell, Arkansas

BASIS & NEEDS	2000	2025
Population	5,013 people	18,900 people
Police Officers	11 sworn officers (2.2 officers per 1,000 population)	42 sworn officers (2.2 officers per 1,000 population)
Other Personnel	1 employee	4 employees
Square Feet	5,400 square feet	_____ square feet

Source: Dunkin, Sefko & Associates, Inc. & the City of Lowell

In terms of building space, a proportionally-sized structure for a total of 46 Police Department employees would need to be approximately _____ square feet. One option, in the event that adequate square footage is unavailable in the future "Heart of Lowell" Town Center area (and in conjunction with the City Administrative Building which houses the City Court), a police substation could be constructed in conjunction with one of the City's future fire station sites. Police substations allow communities that are growing geographically to stay within accepted response times to all areas of the city. The City should remain aware of its rate and direction of growth, and it should make adjustments in Police Station building size and location, as well as personnel, accordingly. It should be noted that the City is currently considering moving the Police Department into the main City Administrative Building – this makes sense as it would place Police Department functions in closer proximity to the City Court, which would simplify Police operations accordingly.

Street Department / Parks / Animal Control Facility

Some of the City's administrative functions are accommodated in this structure that is an annex to, and located behind, the Fire/Police Facility. This facility is approximately 1,271 square feet in building area, and its primary functions are office space for a limited number of personnel (five employees use the building) in these departments, storage for equipment and materials, and animal detainment. While it is desirable to keep City government administrative operations centralized to some degree, some of these functions (such as storage of materials and animal detainment) could be moved to another facility outside of the future "Heart of Lowell" Town Center area where land area should be put to better use such as retail, offices, civic functions, and other uses that would support the "Town Center" concept.

Lowell Historic Museum

The Lowell Historic Museum, now located in its permanent home at the northwest corner of Jackson Place and McClure Avenue, was originally established in 1976, and has been housed in several different locations including the old City Hall building, a building across from the old City Hall, and in the present City Administration Building on North Lincoln Street. The Museum's new structure has approximately 2,346 square feet of floor area, and it will be used to exhibit artifacts (such as antique furniture, household items, decorative arts, etc.) and memorabilia of the Lowell area since the town's beginnings in 1881. One of the Museum's most outstanding exhibits is a free-standing bulletin-board style exhibit on Monte Ne, which includes reproductions of historic photos of that era.

The Lowell Historic Museum should be solidly tied into the future "Heart of Lowell" Town Center district in a number of ways. Improvements to McClure Avenue and Jackson Street should include ADA-accessible pedestrian routes across the railroad tracks and to the Museum's location, and a strong physical and visual pedestrian linkage should be made to draw visitors toward the Museum. If land parcels on the north side of McClure Avenue could be converted into Town Center supporting land uses, such as "theme" restaurants/cafés with perhaps some retail and office uses, then a stronger linkage could be created to the Museum simply by increasing the amount of foot traffic on the north side of McClure. Enhancing the Museum grounds by creating a "Heritage Garden" in the vacant area north of the structure, and also perhaps on the vacant parcel due east of the Museum, would also serve to attract more attention (and visitation) to the Museum.

Community Library

The City of Lowell does not currently have a library for the use of its citizens. Current library and research needs of Lowell's citizens are accommodated, to some degree, by the libraries in other adjacent communities. Lowell needs to consider providing library services for its own residents in the future. The standard generally recommended by the American Library Association (ALS) is 0.75 square feet per library patron. For its present year 2000 population of 5,013 persons, the City should have approximately 3,700 square feet devoted to meeting library and research needs of its citizens. In order to meet this standard for its future population of 18,900 persons in the year 2025, the City will needs a facility that is approximately 14,000 square feet in size (see **Table 5-6**).

Table 5-6
LOWELL COMMUNITY LIBRARY:
SQUARE FEET NEEDED
City of Lowell, Arkansas

YEAR	ALS Standard	Population	Need
2000	0.75/person	5,013 people	3,700 square feet
2025	0.75/person	18,900 people	14,000 square feet

Source: Dunkin, Sefko & Associates, Inc. & the City of Lowell

With rapidly changing and expanding technologies in the world today, it is becoming increasingly important for citizens to have access to computers and to the Internet, especially for the purposes of research. It is recommended that the City consider the construction of a multi-purpose resource center that would not only be able to provide library services, but also expanded research and learning services as well. The future "Heart of Lowell" Town Center would be the logical, and most desirable, location for the resource center along with the other civic-related land uses, public park/open space, and retail/business land uses – proximity to all of these in the City's future civic core would further enhance the resource center's visibility, accessibility and usage. Combining this facility with a possible civic center complex that accommodates programs and activities for both the City's youth and its senior citizens would be an ideal way to make it most available to a wide range of the City's citizenry.

In Conclusion

Anticipating change, and adjusting to it, may be one of the most challenging aspects related to local government provision of services and facilities, including parks and open space and other community facilities. Just as the City is always changing, so should the City's park system and its inventory of other community facilities.

Parks & Open Space

Lowell should generally plan its park and recreation facilities on the basis of its calculated build-out population, and should concentrate not only upon providing park acreage, but upon providing a full-service facility-based park and recreation system. The City should also concentrate principally on the recommended hike-and- bike trail system, due to the fact that this trail system represents a unique opportunity for Lowell to provide a facility to its citizenry that is not available in any other community in the vicinity. A generalized priority listing for improving the park and open space system is shown in **Table 5-7**.

The City should, at the earliest possible opportunity, retain the services of a professional park planning expert to help the City decide, and proactively plan for, what improvements and amenities it wants for its community park sites. This expert could help the City to identify specific needs and to take Lowell's park master-planning efforts to a new level. In much the same way that the *Future Land Use Plan* map will help Lowell decision-makers make City-wide capital improvements based on an established plan, master planning Lowell's overall park system will ultimately help the City to make expenditures on capital improvements within its parks in a prudent, and fiscally responsible, way in the future.

Table 5-7
RECOMMENDED PRIORITY LISTING
City of Lowell, Arkansas

PARK ELEMENT	RECOMMENDATION
Hike-and-Bike Trails	Concentrate on a City-wide system. Implement the system within existing developed areas first. Require future developments to provide access to the system.
Community & Regional Parks	Retain the services of a professional park planning expert to help the City identify specific needs and to master plan Lowell's overall park system.
Neighborhood Parks	Ensure the land dedication for and, where feasible, the construction of park facilities for, additional neighborhood parks as new development occurs.

Source: The City of Lowell's *Parks & Open Space Plan*

Other Community Facilities

It should be noted that rapidly changing technology and governmental operation methods often modify the spatial needs of municipal employees and departmental functions as time progresses. These recommendations are intended to provide general guidance only, and a detailed architectural evaluation should be undertaken prior to initiating the design of any new facility or modification of any existing public facility. It is recommended that within the next two years (by 2006), the City retain the professional services of a design team comprised of architects and urban planners to conduct a detailed evaluation and analysis of municipal buildings to determine what, if any, building expansions or entirely new facilities will be necessary to serve the City's future build-out population, and to begin prioritizing such expansions/facilities to ensure that the City of Lowell keeps pace with growth.

Table 5-8 contains the summarized recommendations for community facilities as discussed in this chapter.

Table 5-8
COMMUNITY FACILITY RECOMMENDATIONS
City of Lowell, Arkansas

General	In approximately two years (by 2006), the City should conduct a detailed evaluation of municipal buildings to determine if any expansions of the facilities (or new facilities) are necessary to serve the City's growing population.
General	The City should utilize the population-to-employee (and population-to-square footage) ratios contained in Tables 5-4, 5-5 and 5-6 herein to ensure that the City's future population will be adequately served with essential community facilities and services.
City Administration Building	Continue acquisition of additional land area for expansion of the City Administration Building, and closely coordinate planning and design of the Building with the future "Heart of Lowell" Town Center concept.
Fire Department	Begin finding locations for, and acquisition of, two additional fire station sites in the westernmost and easternmost areas of the City's planning area – locations should be in the vicinity of State Highway 264/Spring Creek Road, and near Frisco Cemetery Road/Ervin McGarrah Road, respectively.
Police Department	Plan for the expansion of central Police operations within the future "Heart of Lowell" Town Center. Also consider including a small Police Sub-Station in the design of future fire station sites (small area for completing paperwork, making phone calls, etc.)
Street Department / Parks / Animal Control Facility	Consider relocating certain functions (such as storage of materials and animal detainment) to another facility outside of the future "Heart of Lowell" Town Center area (to make better use of land area).
Lowell Historic Museum	Enhance the Museum's presence, and its use and enjoyment, by creating strong physical and visual pedestrian linkages to it in the design of the Town Center. Explore the feasibility of creating a civic-sponsored, and citizen participatory, "Heritage Gardens" area north of (and perhaps east of) the Museum to enhance and emphasize its importance to the Town Center concept.
Community Library	Explore the feasibility of creating a multi-purpose resource center, possibly in conjunction with a civic center complex that accommodates both youth and senior activities, within the future "Heart of Lowell" Town Center.

Source: Dunkin, Sefko & Associates, Inc. and City of Lowell.

City of Lowell

COMPREHENSIVE PLAN 2025

Chapter 6:
Neighborhood & Business Enhancement Plan

Introduction

The City of Lowell, as northwest Arkansas' *"A Town With A Past – A City With A Future,"* has a unique opportunity to make a substantial regional impression. Because of its proximity to Interstate Highway 540, and its location right in the middle of the Rogers/Bentonville and Springdale/Fayetteville portion of the Interstate, it is seen by countless visitors to the scenic northwest Arkansas area each year. Lowell has the ability to greatly impact the way the region is seen by these visitors and the way it is perceived by its residents and peer cities. The City, therefore, must balance its local and regional roles, serving both those who visit Lowell and those who reside there.

One important element within Lowell locally is the quality of its residential neighborhoods. Neighborhoods that provide safe and attractive living environments with convenient access to recreation, shopping, and work prove to be sustainable areas that contribute positively to the overall community for many years to come. An important regional element is the way in which Lowell is viewed from major roadways, especially Interstate Highway 540 and U.S. Highway 71-B. This "view from the road", formed mainly by the businesses that exist along them, is extremely important in that it often provides people with their first impression of Lowell. This influences their basic perceptions of the City before they fully experience it. The *Neighborhood & Business Enhancement Plan* of the Comprehensive Plan provides an analysis of these two important elements of Lowell.

Neighborhood Enhancement

While it is difficult to define, a *neighborhood* can be described as a residential area in the community with boundaries demarcated by thoroughfares, collector streets, or other man-made or natural features. The neighborhood may vary in size from several blocks to hundreds of acres. However, a neighborhood cannot adequately be described solely by its physical structures. The definition of a *neighborhood* is affected by an almost indefinable "sense of community" and quality of life enjoyed by its residents. Each neighborhood is unique, and it is that uniqueness which makes neighborhoods difficult to define with any degree of precision. However, for residential development and planning purposes, the following factors should be considered:

- Physical condition of housing units;
- Opportunities for social interaction (e.g., centralized gathering areas, parks, etc.);
- Careful placement of public and retail land uses (i.e., on the edges of the neighborhood);
- Proximity to schools, churches, and recreational facilities;
- Accessibility by emergency services;
- Adequate lighting and other features which foster the feeling of safety (along streets and within park areas);
- Continued investment in public and private property to stabilize property values (i.e., consistent code enforcement);

- Acceptable level of owner-occupied dwelling units; and
- Condition of public facilities and infrastructure serving the area (i.e., street maintenance, adequate drainage facilities, availability of municipal water and sanitary sewer services, etc.).

A successful neighborhood is the creation of a sustainable environment where ongoing investment in property is supported by public investment in schools, parks and open spaces, and infrastructure; where there are opportunities for social interaction; where there is accessibility for pedestrians, bicyclists and vehicles; and where distinctive characteristics are apparent. All of these give a neighborhood area a unique identity, its own "spirit of place" within the overall context of the community. The quality and livability of Lowell's neighborhoods are integral to the community's overall character and quality. Upkeep and maintenance of both private and public property are critical to neighborhood viability and sustainability. Maintenance of neighborhoods and facilities also affects the larger community. If left unabated, blighted areas create a 'ripple effect,' which impedes other civic objectives, including such actions as economic development and private investment. Thus, it is in the public interest to maintain the highest possible housing quality and environmental character within each neighborhood area. Generally, cooperative action by property owners, tenants, the municipality and volunteers are required to maintain and upgrade the quality of housing within a community.

The standards for new residential development should be such that long-term maintenance is simplified, and homes become more easily maintained in an attractive condition. Lowell's commitment to quality will be reflected in residential developments that exhibit lasting value and stability, and the likelihood of this occurring is greatly increased when the City adopts higher standards for home construction and better overall subdivision design and layout standards. It is recommended that the City develop a range of lot and dwelling sizes to continue the goal of a balanced housing mix (also see the *Housing Density* discussion in the *Future Land Use Plan* chapter). In addition, the City should continue to enforce its Land Development Code, building codes, and minimum housing standards in areas that are undeveloped and in re-developing areas of the community. Proactive enforcement of City policies and regulations prior to development is critical to the maintenance of the local housing stock and to the high standards of community development to which Lowell is committed.

The list of standards recommended for new residential developments (low-, medium- and high-density residential) are as listed in the *Future Land Use* chapter of the Comprehensive Plan. These standards should be included within the City's Land Development Code and other home construction codes, as applicable.

Increasing Code Enforcement Efforts

Many cities have codes and ordinances in effect that are not generally enforced unless a citizen voices concern. Often, the result of this is that municipalities are consistently in the position of

being reactive instead of proactive. One of the issues that Comprehensive Plan Steering Committee members discussed at some length was the need for more proactive enforcement of Lowell's regulations. The views expressed were that the desired result of this would be more visually pleasing neighborhood areas without much cost to the City. Some of the items that are often considered as cities engage in proactive code enforcement measures include broken-down vehicles, damaged fences, large recreational vehicles parked for extended periods of time, yard mowing and maintenance, excessive trash in front yards, and dilapidated accessory structures. Many cities have adopted property and housing code ordinances that include more strict regulation of these elements. The City of Lowell should consider adopting such an ordinance, and should practice proactive code enforcement throughout the City on a consistent basis.

Business Enhancement

Several major aspects of the City's physical urban design can enhance local land uses, especially in terms of nonresidential development and the related image that the public forms of Lowell. As discussed within the *Future Land Use Plan* (Chapter 3), the land that is designated for nonresidential use is of prime importance to the City due to the fact that, in general, the land is located along the City's major thoroughfares, such as Interstate Highway 540 and U.S. Highway 71-B, making the nonresidential uses very visible not only to residents but to visitors and business patrons. These areas also represent Lowell's major tax-generating opportunities.

Design Guidelines for Development Along Major Roadways

Illustration 6-1
NONRESIDENTIAL DEVELOPMENT WITH PARKING AREAS ORIENTED TO THE INTERIOR OF THE SITE
(City of Southlake Town Center)

The fact that the City of Lowell has recognized the importance of enhancing its image along Interstate Highway 540 and U.S. Highway 71-B is apparent through the high-quality development the City was able to obtain in the form of the "Northwest Arkansas Business Center" office campus on the freeway just south of State Highway 264, and several newer office complexes including the "Puppy Creek Place" and "Parkwood" office complexes (southwest quadrant of State Highway 264/Monroe and U.S. Highway 71-B) and the new medical and general office buildings under construction on the north side of Monroe at Fox Run, and south of Monroe near Lincoln Street. The following discussion focuses on regulations that should be applied to the City's major roadways, including Interstate Highway 540 and U.S. Highway 71-B (i.e., probably as enhancements to the City's new Highway Corridor overlay ordinance in the Land Development Code). These regulations will help Lowell achieve its goal of enhancing its image within these important corridors. The following will specifically be addressed:

- Parking areas,
- Shared driveways,
- Lighting,
- Setbacks,
- Screening,
- Exterior construction,
- Loading docks,
- Landscaping, and
- Signage.

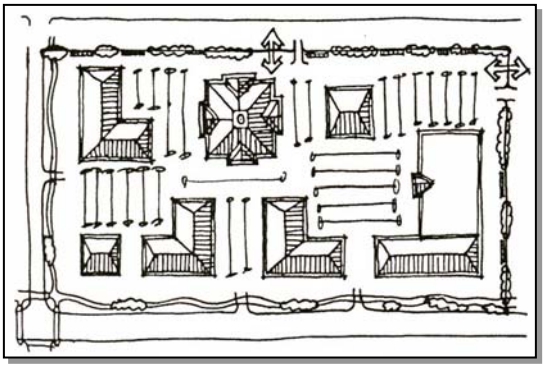

Illustration 6-2

NONRESIDENTIAL DEVELOPMENT LAYOUT WITH PARKING AREAS ORIENTED TO THE INTERIOR OF THE SITE

Parking Areas

Large expanses of pavement for parking do not generally contribute to a positive visual image. Therefore, the City should consider providing incentives for parking areas to be placed to the side or the rear of the primary on-site structure (i.e., toward the back of the lot) and out of the view of people traveling along Interstate Highway 540 and U.S. Highway 71-B, as well as all other major traffic corridors. An example of an incentive would be to require the construction of a slightly reduced number of parking spaces when parking areas are located to the rear. Landscaping and screening, which are discussed later within this Chapter, should also be incorporated into parking areas. The following is an example of the language that could be incorporated into the Lowell's Land Development Code to regulate parking area location:

> *The required parking area within any new development should be not be visible from Interstate Highway 540, U.S. Highway 71-B, State Highway 264, Pleasant Grove Road, N. Goad Springs Road, E. Monroe Avenue and Dixieland Drive; the required parking area should be oriented such that it is located to the interior of the site, with the on-site structures surrounding it to the furthest extent possible.*

Shared Driveways

The concept of requiring shared driveways is not related directly to aesthetics, but to safety. Although there is not direct ingress or egress access for individual development sites from Interstate Highway 540, the integrity of the related service roads is important. The need for shared driveways and limiting curb cuts that would help protect the integrity (and safety) of roadways in Lowell is also discussed within the *Master Street Plan*, Chapter 4. The

Illustration 6-3

A MAJOR ROADWAY WITH NO SHARED DRIVEWAY REQUIREMENT

following is an example of the language that could be used to require shared driveways:

The minimum distance between any two (2) driveway entrances, whether on the same or different lots, shall be one hundred (100) feet, measured along the curb line. Mutual access agreements for parking lots, driveways and adjoining properties shall be required. A professional traffic engineer, subject to City Council approval, shall establish the specific number, width and location of ingress and egress points.

Lighting

Illustration 6-4
EXAMPLES OF AESTHETICALLY PLEASING LIGHT FIXTURES

Lighting for businesses along the City's major roadways is needed to provide visibility for the businesses and safety for those who patronize them. To avoid any adverse impacts on residential areas, lighting facilities should be required to be of downlighting style and reflected away from adjacent residential areas. However, aesthetics are also extremely important. In order to address impacts on adjacent residential areas as well as aesthetics, the following language is recommended for inclusion into the City's Land Development Code:

Lighting facilities shall not produce unwanted light onto adjacent residential property as measured from the property line. If, after all corrective action has been taken, there is illumination crossing the property boundary, under no circumstance shall the illumination be greater than 0.05 footcandles, as measured at five (5) feet inside the adjacent residential property.

Light poles and fixtures shall be of a single color that is compatible with and complementary to the architecture of the building and the overall development.

Setbacks

Minimum building setbacks along the City's major roadways should be a minimum of 50 feet from the right-of-way, and side street setbacks should be at least 30 feet from the right-of-way. This recommendation should only apply to building setbacks, but parking areas and other paved areas should observe a minimum 15-foot setback along all major roadways in order to allow a landscaped buffer in front of parking areas. Requiring these elements to be set back from the right-of-way not only contributes to better aesthetics, but also is safer because it creates less visual obstruction and confusion for drivers upon going into, or out of, development sites. The revised regulation could read:

The minimum front setback distance for buildings, including loading areas, from the rights-of-way of Interstate Highway 540, U.S. Highway 71-B, State Highway 264, Pleasant Grove Road, N. Goad Springs Road, E. Monroe Avenue and Dixieland Drive shall be fifty (50) feet. The minimum side street setback distance for buildings, including loading areas, from these rights-of-way shall be thirty (30) feet. The minimum setback distance for parking areas and other paved surfaces (except sidewalks) from these rights-of-way shall be fifteen (15) feet.

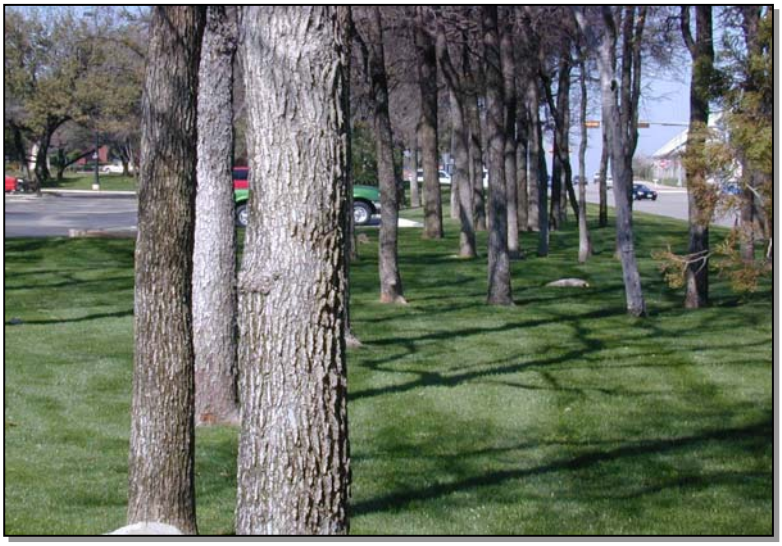

Illustration 6-5

EXAMPLE OF A WIDE SETBACK BETWEEN THE SERVICE ROAD AND A RETAIL DEVELOPMENT

Screening

There are many elements that are needed for business to operate that are not generally considered to be visually attractive. These various elements include trash receptacles (and related areas), open storage (and related areas), expansive parking lots, service areas, ground-mounted equipment, and roof-mounted equipment. Acceptable means by which to provide screening generally should include landscaping, earth berms in conjunction with landscaping (mainly for parking areas), masonry walls in conjunction with landscaping, parapet walls (mainly for roof-mounted equipment), and use of other materials that are compatible with the structure(s). Screening mechanisms should be constructed at a height that is appropriate to the element being screened, which is generally between three and eight feet. Other issues include maintenance and visual appeal. Following is a discussion of the various elements that should be considered in the context of requiring screening.

Illustration 6-6

MASONRY SCREENING WALL & LANDSCAPING SCREEN A TRASH RECEPTACLE & LOADING AREA (Wal-Mart in Plano, Texas)

Elements To Be Screened

The following language should be incorporated into the Land Development Code to screen these specific elements:

Trash receptacles (and related areas) that are not within a screened service area and that would otherwise be visible from a public right-of-way shall be screened from public view and from adjacent property by a minimum six-foot (6') screening wall on at least three (3) sides. The fourth side, which is to be used for garbage pickup service, may provide an optional gate to secure the trash receptacle (and related area).

Open storage of materials, commodities or equipment (and related areas) shall be screened from public view and from adjacent property with a minimum six-foot (6') screening wall. No open storage may exceed the height of the screening wall.

All parking areas that are located adjacent to a public right(s)-of-way shall be screened from the general view of the right(s)-of-way by a three-foot (3') landscaped hedge, preferably also with berming.

Illustration 6-7

MASONRY SCREENING WALL & LANDSCAPING SCREEN A TRASH RECEPTACLE & LOADING AREA (Wal-Mart in Plano, Texas)

Illustration 6-8

EXAMPLE OF A SCREENING WALL THAT PROTECTS A REFUSE CONTAINER FROM PUBLIC VIEW

Service areas, such as loading docks and delivery entrances, shall be screened from public view and from adjacent property with a minimum six-foot (6') screening wall.

Ground-mounted mechanical equipment, including utility structures, transformers and natural gas regulating stations, shall be screened from public view and from adjacent property with a screening wall that is equal to or greater in height than the structure(s)to be screened.

Illustration 6-9
SCREENED OPEN STORAGE AREA

Roof-mounted mechanical equipment shall be screened from public view and from adjacent property with a parapet wall, mansard-style roof or other architectural extension equal in height to the unit(s), except when the unit height exceeds five (5) feet. When the height does exceed five (5) feet, an additional roof setback shall be required at a ratio of two (2) horizontal feet for each additional foot of vertical height above five (5) feet.

Landscaping

The City should allow landscaping elements to be used as a screening wall, but only after approval by City staff. Also, language should be included within the Land Development Code that ensures landscaping elements will provide adequate screening. For example:

Landscaping elements are permitted to be used to meet screening requirements upon approval by the City Council. Landscaping elements shall provide a solid, opaque screen within two (2) years of the initial planting at the required height of the screening device, and such elements shall be maintained so that a solid, opaque screen is provided on a consistent basis.

Illustration 6-10
LANDSCAPING ELEMENTS DO NOT PROVIDE ADEQUATE SCREENING IN THIS EXAMPLE

Height Specifications

Height guidelines should define the allowable minimum and maximum screening height; height requirements vary depending on the element to be screened, but generally, masonry or wrought iron screening walls should be a minimum of six (6) feet.

Illustration 6-11
SCREENING WALL WITH COMPATIBLE MATERIALS & VARIATION

Materials Specifications

The City should specifically prohibit the use of chain link, wood, barbed wire, fiberglass panels, and corrugated steel or sheet metal to be used to meet screening requirements. In addition, screening walls should be complementary to the design of the business (or business development); the following language should be included to ensure this in the future:

Masonry screening walls shall be constructed with brick or wrought iron and shall be designed in a manner that is consistent with the exterior finish of the main building(s) in material and color. Screening walls shall generally be extensions of the business's or development's architectural design. The only exception to this shall be a landscape screen, approved by the City Council.

Requiring Variation

In addition to the screening wall itself, the City should consider requiring variation of the screening wall where masonry elements are used; this is especially important for screening walls that need to be extremely long to provide adequate screening. This regulation should read:

All masonry screening walls that are 20 feet in length or longer shall provide some horizontal variation in the wall that is equal to at least 3 feet in depth for every 20 feet in length.

Exterior Construction

The way in which the exterior of a structure looks along Lowell's major traffic corridors has a major effect on the visual image of the City that is projected. The following is a discussion of recommendations specifically related to the design of buildings within these important corridors within Lowell.

Illustration 6-12
THE "VIEW FROM THE ROAD" OF A METAL BUILDING

Exterior Construction

Materials used for the exterior facades of buildings within these areas of the City should generally be limited to brick, stone, rock, or some "real masonry" variation thereof. These materials should comprise at least 80 percent of the walls that face or can be seen from any major roadway. City Council should be able to approve alternate materials such as highly textured concrete, concrete block, or stucco finishes if they can be proven to be highly durable and maintenance-free (i.e., do not have to be re-painted every few years). It is also recommended that reflective and/or mirrored glass not be permitted to comprise more than fifty

Illustration 6-13
RETAIL USE WITH FAÇADE OFFSETS

percent of the façade(s) facing the City's major roadways. Metal buildings should likewise not be permitted, unless the façade(s) facing either of these roadways is covered with brick, stone or rock, thereby shielding the metal façade from being visible from any public road.

Illustration 6-14
RETAIL USE WITH FAÇADE OFFSETS

Façade Articulation for Large Buildings

The facades of large nonresidential structures can be large and visually unappealing; this is sometimes referred to as "massing". Massing concerns have generally arisen in response to large retailers (often referred to as "big box" retailers). A building that is 100,000 square feet in size can have a façade that is more than 300 feet in length, and often with large retailers, this façade is a flat expanse of wall with little to no variation or decoration. While large retailers are a real economic and job-base asset to Lowell, large, flat walls do not provide the visual appeal for which the City is striving. Therefore, similar to the recommendation made for requiring variation of masonry screening walls, the City should consider requiring "façade offsets" to address this before it becomes an issue. An example of the language that should be used to incorporate such a requirement within the Land Development Code is:

For all nonresidential structures 50,000 square feet in size or greater, architectural variation of the exterior walls of the structure that are visible from Interstate Highway 540 or any other major traffic corridor shall be provided. The architectural variation shall be equal to at least 5 feet in depth for every 25 feet in vertical or horizontal length.

Illustration 6-15
LANDSCAPING BETWEEN A NONRESIDENTIAL USE & A MAJOR ROADWAY

Landscaping

Landscaping is generally accepted as adding value to property and is an aesthetically pleasing element to incorporate along the City's major traffic corridors. Landscaped areas also increase the amount of land that is devoted to pervious surface area, allowing more water to permeate into the soil and helping to recharge area aquifers, particularly within the Cave Springs Recharge Area. Xeriscape landscaping, which requires a lesser amount of water than other types of landscaping, should be encouraged within Lowell. The following are landscaping requirements that should be considered for inclusion within the Land Development Code:

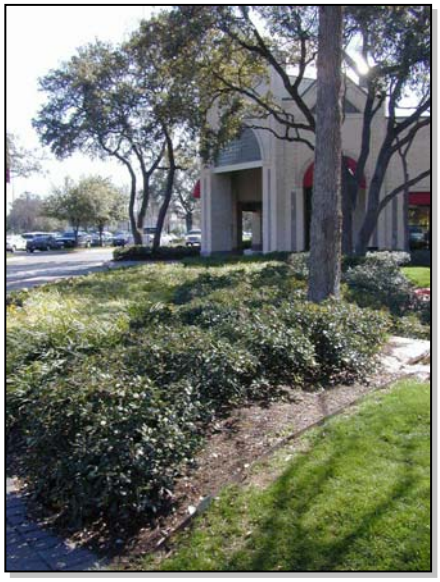

Illustration 6-16
LANDSCAPING BETWEEN A RETAIL USE & THE REQUIRED PARKING AREA

A landscaped edge shall be incorporated adjacent to the rights-of-way of major traffic corridors.

A minimum of fifteen percent (15%) of the front yard shall be landscaped area.

Landscaped areas within parking lots shall be equal in size to at least one (1) parking space, with no landscaped area less than fifty (50) square feet in size. The total landscaped area within a parking lot shall be equal to at least sixteen (16) square feet per parking space.

Illustration 6-17
EXAMPLE OF LANDSCAPING BETWEEN A NONRESIDENTIAL USE AND A MAJOR ROADWAY

One shade tree shall be provided for every twelve (12) parking spaces within parking lots that contain twenty (20) or more parking spaces. Up to twenty-five percent (25%) of the required trees shall be permitted to be planted within the landscaped edge.

Plants used shall be drought-resistant, and xeriscape techniques shall be used to the furthest extent possible.

In addition to the previous recommendations, a credit to put toward the overall required landscaped areas should be provided for the protection and preservation of existing trees. Also, in order to provide guidance to the development community to help these requirements to be met, the City should provide a listing of appropriate plant materials, particularly xeriscape materials. Use of plants not specified should be subject to approval by the City.

Signage

Signs perform many functions and come in many different forms – directional, locational, and informational (i.e., announcing special events), to name a few. The City can use all types of signs in a cohesive manner to help give Lowell a special identity that would be recognizable, particularly along Interstate Highway 540 and U.S. Highway 71-B.

Illustration 6-18
AN EFFECTIVE GATEWAY TREATMENT ESTABLISHED BY THE CITY OF ENNIS, TEXAS

City-Established Gateway Signs

Well-designed, visible gateway treatments placed at strategic locations along major roadways would provide citizens of and visitors to Lowell with a visual image of the geographic location of the City, thereby effectively and clearly defining Lowell's identity. Establishing gateways would help people to differentiate Lowell from the Cities of Springdale and Rogers, which is especially difficult for those traveling along Interstate Highway 540 and U.S. Highway 71-B. These gateway treatments, although they will likely be established at different times, should have a consistent design so that a particular image becomes associated with the City.

General Signage for Nonresidential Land Uses

As was discussed within the *Future Land Use Plan* (Chapter 3), nonresidential uses generally seek to locate along major thoroughfares due to the visibility. For the same reason, nonresidential uses generally desire the largest, brightest, highest sign to further increase their visibility. In order to prevent the proliferation of signs within along Interstate Highway 540 and other major roadways, the City should consider certain requirements for new nonresidential development, such as:

The maximum allowable height, including the base, of any sign shall be six feet (6').
Note: There could be special provisions for new nonresidential uses locating in proximity to an existing nonresidential use with a higher sign in order to ensure fair market opportunity.

Colors used for any sign shall be consistent with the overall design of the primary building.

The use of fluorescent colors shall not be permitted.

Flashing signs, specifically sings with moving letters, words, or pictures, shall not be permitted.

Illustration 6-19
EXAMPLE OF WELL-DESIGNED SIGNS

The use of temporary signs (i.e., signs that advertise special sales, etc.) shall be limited to a period not to exceed thirty (30) days, unless otherwise permitted by the City Building Official.

Billboard Signs

In addition, billboards (i.e., any off-site signage) should be prohibited within the Interstate Highway 540 and other major traffic corridors. Regardless of the fact that, in general, the development community will want to locate billboards particularly along the Interstate, such signs are inconsistent with the community image Lowell wants to project within this high-traffic corridor. Many cities across the state of Arkansas have recognized that the proliferation of billboard signs is not a positive thing for the image they want to put forth along their major roadways. Lowell can eliminate the potential future problem of visual clutter that can be caused by billboards by prohibiting them before they become a more of a concern for the City.

In Conclusion

As mentioned previously, quantifying the elements that contribute to a community's quality of life is a challenging task, primarily because the defining of those elements is subjective. This chapter has provided discussion of numerous enhancement strategies related to neighborhoods within Lowell and to businesses along Interstate Highway 540 and the City's other major traffic corridors. These recommendations should be considered cohesive – it will take daily implementation over a period of time for these elements to make a real, lasting contribution to Lowell's community image and economic future. **Table 6-1** briefly summarizes the recommendations made within this chapter.

Table 6-1
NEIGHBORHOOD & BUSINESS ENHANCEMENT PLAN RECOMMENDATIONS
City of Lowell, Arkansas

Neighborhood Enhancement Strategies
Incorporate the list of standards recommended for all new residential developments (listed in the *Future Land Use Plan* chapter), including low-, medium- and high-density residential developments, into the City's Land Development Code and/or building codes, as applicable.
Consider adopting more stringent property maintenance ordinances that would allow the City to regulate the maintenance of properties, particularly with respect to broken-down vehicles, damaged fences, recreational vehicles parked for extended periods of time, yard mowing and maintenance, excessive trash in front yards, and dilapidated accessory structures.
Practice proactive code enforcement throughout the City on a consistent basis
Business Enhancement Strategies
Increase development standards along the City's major thoroughfares, including Interstate Highway 540, U.S. Highway 71-B, State Highway 264, Pleasant Grove Road, N. Goad Springs Road, E. Monroe Avenue and Dixieland Drive. Such standards should specifically address parking, shared driveways, lighting, setbacks, screening, exterior construction, loading docks, landscaping, and signage.
Adopt these standards into the City's Land Development Code in the appropriate places.

Note: Not in any order of priority.

Source: City of Lowell's *Neighborhood & Business Enhancement Plan.*

City of Lowell

COMPREHENSIVE PLAN 2025

Chapter 7: Implementation Strategies

Introduction

With the publication and adoption of this Comprehensive Plan document, the City of Lowell will have taken an important step in shaping its future. The Plan will provide a very important tool for City staff and civic leaders to use in making sound planning decisions regarding the long-term growth and development of Lowell. The various elements of the Plan are based upon realistic growth objectives and goals for the City that resulted from an intense comprehensive planning process involving a Steering Committee, citizens, Lowell staff, elected and appointed officials, and major stakeholders in the community.

The future quality of life in Lowell, as well as the environment of the City, will be substantially influenced by the manner in which Comprehensive Plan recommendations are administered and maintained. The Comprehensive Plan should never be considered a finished product, but rather a broad guide for community growth and development that is always evolving and changing in scope.

Changes within Lowell, such as economics and development trends, that were not anticipated during preparation of the Plan will occur from time to time, and therefore, subsequent adjustments to the Plan will be required. Elements of the City that were treated in terms of a general relationship to the overall area may, in the future, require more specific and detailed attention. Planning for the City's future should be a continuing process, and the Comprehensive Plan is designed to be a dynamic tool that can be modified and periodically updated to keep it in tune with changing conditions and trends.

The full benefits of the Plan for the City of Lowell can only be realized by maintaining it as a vital, up-to-date document. As changes occur and new issues within the City become apparent, the Plan should be revised rather than ignored. By such action, the Plan will remain current and effective in meeting the City's decision-making needs for many years to come.

The Roles of the Comprehensive Plan

A Guide for Daily Decision-Making

The current physical layout of the City is a product of previous efforts put forth by many diverse individuals and groups. In the future, each new development that takes place, whether it is a subdivision that is platted, a home that is built, or a new school, church or shopping center that is constructed, represents an addition to Lowell's physical form. The composite of all such efforts and facilities creates the City as it is seen and experienced by its citizens and visitors. If planning is to be effective, it must guide each and every individual development decision. The City, in its daily decisions pertaining to whether to surface a street, to approve a residential plat, to amend a zoning

ordinance provision, to enforce the building codes, or to construct a new utility line, should always refer to the basic proposals outlined within the Comprehensive Plan. The private builder or investor, likewise, should recognize the broad concepts and policies of the Plan so that their efforts become part of a meaningful whole in planning the City.

A Flexible & Alterable Guide

The Comprehensive Plan for the City of Lowell is intended to be a dynamic planning document – one that responds to changing needs and conditions. Plan amendments should not be made without thorough analysis of immediate needs, as well as consideration for long-term effects of proposed amendments. The Lowell City Council and other Lowell officials should consider each proposed amendment carefully to determine whether or not it is consistent with the Plan's goals and policies, and whether it will be beneficial for the long-term health and vitality of the overall community of Lowell.

At one- to three-year intervals, a periodic review of the Comprehensive Plan with respect to current conditions and trends should be performed. Such on-going, scheduled reevaluations will provide a basis for adjusting capital expenditures and priorities, and will reveal changes and additions which should be made to the Plan in order to keep it current and applicable long-term. It would be appropriate to devote one annual meeting of the Planning and Zoning Commission to reviewing the status and continued applicability of the Plan in light of current conditions, and to prepare a report on these findings to the Lowell City Council. Those items that appear to need specific attention should be examined in more detail, and changes and/or additions should be made accordingly. By such periodic reevaluations, the Plan will remain functional, and will continue to give civic leaders effective guidance in decision-making. Periodic reviews of the Plan should include consideration of the following:

- The City's progress in implementing the Plan;
- Changes in conditions that form the basis of the Plan;
- Community support for the Plan's goals, objectives & policies; and
- Changes in State laws and new case law.

Public Participation

In addition to periodic annual reviews, the Comprehensive Plan should undergo a complete, more thorough review and update every five years. The review and updating process should begin with a citizen steering committee similar to the one appointed to assist in the preparation of this Plan, thereby encouraging citizen input from the beginning of the process. Specific input on major changes should be sought from various groups, including property owners, neighborhood groups,

civic leaders, major stakeholders, developers, merchants, and other citizens and individuals who express an interest in the long-term growth and development of the City.

An informed, involved citizenry is a vital element of a democratic society. The needs and desires of the public are important considerations in Lowell's decision-making process. Citizen participation takes many forms, from educational forums to serving on City boards and commissions. A broad range of perspectives and ideas at public hearings helps City leaders and the City Council to make more informed decisions for the betterment of the City as a whole. Lowell should continue to encourage as many forms of community involvement as possible as the City implements its Comprehensive Plan.

Implementation Strategies

There are two primary methods of implementing the Comprehensive Plan - proactive and reactive methods. Both must be used in an effective manner in order to successfully achieve the recommendations contained within the Plan.

Examples of proactive methods include:

- Developing a capital improvements program (CIP), by which the City programs the expenditure of funds to finance certain public improvements (e.g., utility lines, roadways, etc.), meeting objectives that are cited within the Plan;
- Engaging in proactive code enforcement;
- Establishing/enforcing zoning regulations (in the City's Land Development Code); and
- Establishing/enforcing subdivision regulations (also in the City's Land Development Code).

Examples of reactive methods include:

- Rezoning a development proposal that would enhance the City and that is based on the Comprehensive Plan;
- Site plan review; and
- Subdivision review.

Several specific strategies, both proactive and reactive, and financing mechanisms that could be used by the City of Lowell to implement the recommendations and policies contained within the Comprehensive Plan, are described within the following sections.

Capital Improvements Programming

Capital improvements are integrally linked to the City's Comprehensive Plan and to its Land Development Code. A capital improvement such as a new fire station illustrates this concept. The Comprehensive Plan recommends areas for a particular type of development, and the City's Land Development Code reinforces Plan recommendations with applicable zoning districts and regulations that are consistent for that type of development, and with applicable subdivision regulations that govern subdivision layout as well as what essential public facilities (e.g., utility extensions, roadway widths, etc.) will be necessary to accommodate that type of development. The type of development that is recommended by the Comprehensive Plan, and that is regulated and approved in accordance with the City's Land Development Code, dictates where the new fire station should be located, how many apparatus and fire personnel it should accommodate, etc.

The Comprehensive Plan makes recommendations on the various public improvements that will be needed to accommodate growth and development envisioned for the City over the next 20 years or more. Many of the changes involve improvements that will be financed by future improvement programs. It would be desirable to invest regularly in the physical maintenance and enhancement of the City of Lowell rather than to undertake large improvement-type programs at longer time intervals. A modest amount of money expended annually on prioritized items in accordance with Plan recommendations will produce a far greater return to the City than will large expenditures at long intervals.

Regulatory Mechanisms & Administrative Processes

The usual processes for reviewing and processing zoning amendments, development plans, and subdivision plans provide significant opportunities for implementing the Comprehensive Plan. Each zoning, development and subdivision decision should be evaluated and weighed against applicable proposals contained within the Plan. The Plan allows Lowell to review proposals and requests in light of an officially prepared document adopted through a sound, thorough planning process. If decisions are made that are inconsistent with Plan recommendations, then they should include actions to modify or amend the Plan accordingly in order to ensure consistency and fairness in future decision-making. Amending the City's Land Development Code represents major, proactive measures that the City can take to implement Comprehensive Plan recommendations. Specifics on the way in which this can be effectively achieved are discussed in the following sections.

Land Subdivision Regulations

The act of subdividing land to create building sites is one that has the greatest effect on the overall design and image of Lowell. Much of the basic physical form of the City is currently created by the layout of streets, easements, and lots. In the future, the basic physical form of Lowell will be further affected by elements such as new development, both residential and non-residential, and the

implementation of the *Master Street Plan*. As mentioned previously, many of the growth and development proposals contained within the City's Comprehensive Plan can be achieved through the exercise of subdivision control and other "reactive" practices. Some elements of the Plan, such as acquisition of major roadway rights-of-way and drainage easements, can be influenced, guided and actually achieved during the process of subdividing the land. Once the subdivision has been filed (recorded) and development has begun, the subdivision becomes a permanent, integral part of the City's urban fabric. Thereafter, it can be changed only through great effort and expense. Lowell's subdivision regulations should be updated in accordance with *Master Street Plan* recommendations, specifically with respect to the right-of-way widths and sections for each type of roadway that are contained therein. With this implementation measure, as individual plats are approved, the City can require that rights-of-way be dedicated in conjunction with the recommendations as generally set forth in the *Master Street Plan*.

Zoning Regulations

All zoning and land use changes should be made within the context of existing land uses, future land uses, and planned infrastructure, including roadways, water and wastewater. The zoning regulations within the City's Land Development Code should be updated to conform with the applicable recommendations contained within this Comprehensive Plan. In addition, after a thorough review of the zoning regulations, it is recommended that the following listed changes be made within the Code:

- Update the Use Chart
  - To ensure that the land uses allowed in each zoning district are in conformance with Comprehensive Plan recommendations for what each district should include.
- More Variety in Residential Lot Sizes
  - The minimum required lot size should be 10,000 square feet.
  - New subdivisions with lot sizes ranging to 8,000 square feet should only be allowed through the Planned Development (PD) zoning process.
  - Additional residential districts with larger lot sizes, including districts with a one-half acre minimum and one-acre minimum, should be incorporated.
- Ensure Variety For Residential House Sizes
  - Need to encourage variety in house sizes, and need to encourage construction of larger "move-up" homes within the City since there already exists a healthy housing stock of smaller, more attainable homes.
- Ensure High Quality Residential Development
  - Incorporate the design and quality standards listed within the *Future Land Use Plan*, Chapter 3, into the applicable sections and districts within the City's Land Development Code.
- Ensure Quality Development Along the City's Major Travel Corridors
  - The City should re-visit its highway corridor overlay district to ensure that the recommendations in the Comprehensive Plan that are related to ensuring high-quality, aesthetically pleasing nonresidential development along these corridors are integrated into the City's development regulations.

In Conclusion

Implementation is probably one of the most important, yet most difficult, aspects of the comprehensive planning process. Without viable, realistic mechanisms for implementation, the recommendations contained within the Comprehensive Plan will be difficult to realize. These recommendations should be prioritized and added to the City's Capital Improvement Program as funds become available. The City should work toward implementation of recommendations on an incremental, annual basis.